J.F

(AE)

Release 3.1A John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1998 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd
MPsrch_nn n.a n.a. database search, using Smith-Waterman algorithm
Run on: Sun Aug 8 17:01:38 1999; MasPar time 13516.58 Seconds
lbb9.436 Million cell updates/sec Tabular output not generated.
Title: >US-08-287-669-18 Pescription: (1-7653) from USO8287669.seq (10 of 10) Perfect Score: 7653 N.A. Sequence: 1 AGATCTGAAATAAGGTGATAATTCTGGTCAGCAAAGATCT 7653 TCTAGACTTTATTCCACTAITAAGACCAGTCGTTTCTAGA
Scoring table: TABLE jmetric Gap 60
Nmatch STD : Dbase 0; Query 0
Searched: 646147 seqs, 1385953633 bases x 2

Post-processing: Minimum Match 0% Listing first 1000 summaries Database:

embl58
1:em_bal 2:em_ba2 3:em_fun 4:em_htg 5:em_huml 6:em_hum2
7:em_in 8:em_om 9:em_or 10:em_or 11:em_pat 12:em_ph
13:em_pl 14:em_or 15:em_sts 16:em_vi
genbanklil
17:qb_bal 18:qb_ba2 19:qb_htg1 20:qb_htg2 21:qb_inl
22:qb_inl2 23:qb_om 24:qb_ov 25:qb_par 26:qb_ph 27:qb_pl
28:qb_pl2 29:qb_pr1 30:qb_pr2 31:qb_pr3 32:qb_or 33:qb_or 25:qb_pr3 32:qb_or 25:qb_pr3 33:qb_or 25:qb_pr3 33:qb_or 25:qb_pr3 33:qb_or 25:qb_or 33:qb_or 37:qb_or 33:qb_or 33 Database:

Mean 10.846; Variance 5.255; scale 2.064 Statistics: Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Res	Result No.	Score	Query	Query Match Length DB	DB	ID	Description	Pred. No.
	1	7653	100.0	7653	21	CELCED3A	Caenorhabditis elegans	0.00e+00
υ	7	4164	54.4	39908	21	CEC48D1	Caenorhabditis elegans	0.00e+00
υ	m	3359	43.9	314495	19	CEY67H2	Caenorhabditis elegans	0.00e+00
	4	73	1.0	224746	13	CEY56A3	Caenorhabditis elegans	1.25e-33
υ	S	71	0.9	4917	19	AC006766	Caenorhabditis elegans	4.31e-32
υ	ø	71	6.0	4917	22	CELY44E3B	Caenorhabditis elegans	4.31e-32
υ	7	72	6.0	38846	19	AC006696	Caenorhabditis elegans	7.36e-33
	ω	69	6.0	42724	21	CEF53A2	Caenorhabditis elegans	1.46e-30
	σ	72	6.0	43152	21	CELF59B1	Caenorhabditis elegans	7.36e-33
υ	10	72	6.0	43152	21	CELF59B1	Caenorhabditis elegans	7.36e-33
	11	72	0.9	48088	22	CELY44E3A	Caenorhabditis elegans	7.36e-33
U	12	72	6.0	178553	19	AC006891	Caenorhabditis elegans	7.36e-33
	13	72	6.0	245805	20	AC006752	Caenorhabditis elegans	7.36e-33

Caenorhabditis elegans 2.26e-19

0.7 270192 19 CEY48C3

54

86 υ

6e-33 6e-33	6-3	2 - 2	2-2	e-2	e-2	9-2	e-2	e-2	2.5	e-2	6-1	6	96	- T	6-1	e-2	, i	e-2	e-1	e-1	e 1	6-1	e-1	6.		-2	9-1	6-2	9-2	7 (e-2	-9) (I	9 -	e-2	5.5	1 -		9-1	2 - 2	2-2	9-2	-6-	1 (6-1		7 -0	9-1	2-1		-0	
7.366				•			٠									•							•					•			•	•				•																		
elegans elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	Plegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	elegans	egan	egan	egan.	legan	egan
aenorhabditis aenorhabditis	enorhabditi	enorhabditi enorhabditi	enorhabditi enorhabditi	enorhabditi	enorhabditi enorhabditi	enorhabditi	enorhabditi	enorhabditi onorhabditi	enorhabditi	enorhabditi	enorhabditi	enorhabditi	enorhabditi enorhabditi	enorhabditi enorhabditi	enorhabditi	enorhabditi	enor nabarti enorhabditi	enorhabditi	enorhabditi	enorhabdītī enorhabdītī	enorhabditi	enorhabditi	enorhabditi	enorhabditi	enornabditi enorhabditi	enorhabditi	enorhabditi	enorhabditi	enorhabditi onorbabditi	enorhabditi	orhabditi	orhabditi	ornabdıtı Arbabditi	orhabditi	뜮	orhabditi	enorhabditi	enorhabditi	enorhabditi	enorhabditi	enorhabdıtı enorhabditi	norhabditi	orhabditi	orhabditi	orhabditi	Ţ;	orhabditi	orhabditi	orhabditi	enorhabditi	enorhabditi	enorhabditi	norhabditi	enorhabdıtı enorhabditi
AC006752 C		_																																		-			-	-		_	_	_		_	-			U	υc	ט כ	000	
20 A(000	n (1)	н о	Н,		·	0.0	on -	10	. 0	, H	0.				п	4 77	-	, i		10	-	~ ~ ,		10	3 00	6	H +	- ر م ا	10	7		- ·		10		n o	, ,	· თ	on (חס	, _—	0.0	ם כ	00	· ~	о О	on c	n 01		ი <i>ი</i>	10		00
245805 298195	0613	2288	768 918	010	156 291	2559	8342	7513	778	3663	168	177	361	938	109	379	689	091	278	388 428	485	565	578	600	640	645	645	762	7/7	841	852	864	200	155	242	4809	1000 1535	2906	3029	5096	3075 5218	5287	6922	7181	0020	0737	3285	4382	4964	5487	6100	6233	320	8069 6908
0.0 0.0							•	•			•	•							•								•									•	•			•														
72	71	9	64 64	200	20 CC	61	58	οι 4 α	0 0 0 0	58	53	252	4 C	51	52	56	2 6	22	52	2 C	54	53	23	200	2 2 2	26	53	ខ្មា) V	20 4	26	54	U T.	51	20	56	7 C	51	51	53	ט ער ט ער	22	57	ი r გ t	200	54	51	υ 2 π	51	51	51	5.4	56	ا 10 د
14	16	18	19 20	21	2 2 2	24	25	970	2 6	29	30	31	2 cc	34	35	36	. 8 . 8	39	40	4 4	4.3	44	45	46	4 4 6	49	20	51	7 °C	54	52	56	, α υ	0 0	09	61	7	64	65	99	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	69	70	7.2	73	7.4	75	10	78	79	80	82	83	0 0 4 ℃
O	,	טט	U	ပ	C	Ö		υt	ט ט	U	υ	U (υ			U				υc)	υ	υ	U (ט		υ	U I	υ	υ	υ		Ç)		U	υc	υ	O	,	ນ ເ	Ü	1	טנ	ı	υ		(ט ט		υ	υ	O	υ

υ υ

υυ

υυυυυ υ

0 000

c

υυ

00 00

0 0000000 000 000 000

O

3.78e-16 2.26e-14 2.75e-12 2.26e-14 1.33e-11 1.48e-15 1.48e-15 2.6e-14	e-14 e-07 e-09	e - 07 e - 07 e - 09	e-06 e-08 e-09	e-09 e-07	e-06	e-08 e-07	e-07	e-08 e-10	e-07	e-11 e-06	e-07 e-06 e-06	e-06	e-07 e-10	e-07	e-07	e-08	e-07	e-09	e-07	e-08	e-07	e-0/	e-09 e-11	e-07	e-06	0-0	0 0
W(1(1(1) - 2 - 2 - 1)		1110	.,,,,	0 11	., .			1 (1 ()	.,,,,,						•				. , , ,				••	_,.,		, v	. H
elegans elegans elegans elegans elegans elegans elegans elegans	legans legans legans legans	legans legans legans	legans legans legans	legans	legans	legans legans	9 9 9	legans legans	legans	legans legans			legans legans legans	eg	legans	9 9	9 9	9 9	leg	leg	legan	reg leg	legan legan	leg leg	legan	legan	rega Jega
								tis el			tis is ee		itis el itis el itis el		tis el	13	1 12 0	Sin	Sin	is:	is.	13	-1-1		is	Sin	Sis
enorhabdi enorhabdi enorhabdi enorhabdi enorhabdi enorhabdi enorhabdi	rhabdi rhabdi rhabdi rhabdi	rhabdi rhabdi rhabdi rhabdi	rhabdi rhabdi rhabdi	rhabdi rhabdi	rhabdi rhabdi	rhabdi rhabdi	rhabdi rhabdi rhabdi	rhabdi rhabdi	rhabdi	rhabdi rhabdi	rhabdi rhabdi rhabdi	rhabdi rhabdi	rhabdi rhabdi rhabdi	rhabdi	rhabdi	aenorhabdit	senorhabdit	rhabd	senorhabdit	rhabdi	senorhabdit	rhabdi rhabdi	enorhabdit enorhabdit	enorhabdi enorhabdi	enorhabdit	enorhabdi	senornabdıt senorhabdit
Caenorhabditis	Caeno Caeno Caeno Caeno	Caeno Caeno Caeno	Caeno Caeno Caeno	Caeno	Caeno	Caeno	Caeno	Caeno	Caeno	Caeno	Caeno	Caeno	Caeno Caeno Caeno	Caeno	Caeno	Caeno					Caeno		Caeno				Caeno
																76	0F2	200	H11	H10	22	60/ 08	89 2D3	7C10 F8	F12 F12	[13 [13]	н3 E12
AC006741 AC006900 CEY48A6 AC006792 AC006780 AC006858 AC006858	CEVC5(CELMY)	ACOO6 ACOO6 CELH3 CELF5	CELY7	CEH161	CELK1	CELB2	CELY4	CEF182	CET23	CELC1	CECWO CEC261	ACOO6	CELCS CELT2	CEF431	CEZKI	CEZC3	CELCS	CEF373	CEF451	CER01	CEC38	CELF5 CEK111	CEW02	CELT2	CEF54	CEH37	CEKIL
000000000	22112	222	22	21	22	22	217	212	21	13	21 21 22	13	217	21	21	21	212	215	217	212	21	21	21	22	21	130	7.7
276829 292390 294136 296699 299202 299719 299919	1 (1)																										
00000000																											•
4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	37 39 39	3 8 8 8 9 8 9 9 9 8 9 9 9	38 38 4	300	332	37 8	37,	38 41	36	35	 	322	37 35 41	37	3.5 0.7 7.		32	4 4 6	37	38	36	37 38	33 4 2 4 2	36	35	322	א ני ע ג
161 162 164 165 166 168	170 171 172 173	174 175 177	178 179 180	181 182	183	185 186	188	190 191	192	195	197 198	200	202 203 204	205	208	210	212	214	216	218	220	221 222	223 224	225	227	223	230
υυυυ υ	υ υ υ	υυυ	O	υ	υ	υ	o t	υ υ	00	υ	υ	υ	υυ	υ	υυι	, (, ,	O	C	υ	υ	υυ	υ	υc) U	000	U
														÷								·. <u>—</u> .				41	
.86e-2 .20e-1 .86e-2 .30e-1 .20e-1 .31e-1 .71e-1 .23e-2		./le-1 .20e-1 .23e-2 .23e-2		.26e-1			.486-1 .26e-1		.26e-1	. 26e-1 . 26e-1		.26e-1	.48e-1 .33e-1 .33e-1	.26e-1		.75e-1	.13e-1	.26e-1	336-1	4.	.48e-1	.26e-1 .60e-1	.75e-1 .48e-1	.75e-1	2.75e-12 1.33e-11	.48e-1	130-1
egans 7 86e-2 egans 1.20e-1 egans 3.30e-1 egans 1.20e-1 egans 6.31e-1 egans 7.86e-2 egans 7.86e-2	egans 7.86e-2 egans 1.20e-1 egans 3.30e-1 egans 1.20e-1	egans 1./1e-1 egans 1.20e-1 egans 4.23e-2 egans 4.23e-2	egans 3.30e-1 egans 1.33e-1 egans 2.26e-1	egans 2.26e-1 egans 1.33e-1	egans 2.26e-1 egans 2.26e-1	egans 5	egans 4.48e-1 egans 2.26e-1	egans 8.78e-1 egans 1.33e-1 egans 2.26e-1	egans 2.26e-1 egans 2.26e-1	egans 0.78e-1 egans 2.26e-1 egans 2.26e-1	egans 8.78e-1 egans 5.60e-1	egans 2.26e-1 egans 5.60e-1	egans 4.48e-1 egans 1.33e-1 egans 1.33e-1	ans 2.26e-1	ans 4.48e-1 ans 4.48e-1	ans 2.75e-1	ans 1.13e-1	egans 2.26e-1	egans 1.33e-1	egans 4.48e-1	egans 4.48e-1	egans 2.26e-1 egans 5.60e-1	egans 2.75e-1 egans 4.48e-1	gans 2.75e-1	DJ0 2.75e-1	egans 4.48e-1	egans 8./8e-1
is elegans 7,86e-2 is elegans 1,20e-1 is elegans 3,30e-1 is elegans 1,20e-1 is elegans 1,71e-1 is elegans 1,71e-1 is elegans 1,71e-1 is elegans 1,78e-1 is elegans 1,88e-2	is elegans 7.86e-2 is elegans 1.20e-1 is elegans 3.30e-1 is elegans 1.20e-1	is elegans 1./1e-1 is elegans 1.20e-1 is elegans 4.23e-2 is elegans 4.23e-2	is elegans 3.30e-1 is elegans 2.26e-1 is elegans 2.26e-1	is elegans 2.26e-1 is elegans 1.33e-1	is elegans 2.26e-1 is elegans 2.26e-1	is elegans 5	is elegans 4.48e-1 is elegans 2.26e-1	is elegans 8.78e-1 is elegans 1.33e-1 is elegans 2.26e-1	is elegans 2.26e-1. is elegans 2.26e-1	is elegans 2.26e-1 is elegans 2.26e-1 is elegans 2.26e-1	is elegans 8.78e-1 is elegans 5.60e-1 is elegans 2.75e-1	is elegans 2.26e-1 is elegans 5.60e-1	is elegans 4.48e-1 is elegans 1.33e-1 is elegans 1.33e-1	is elegans 2.26e-1 is elegans 1.33e-1	is elegans 5.50e-1 is elegans 4.48e-1 is elegans 5.60e-1	is elegans 2.75e-1	is elegans 1.13e-1	is elegans 2.26e-1	is elegans 1.33e-1.	is elegans 4.48e-1	is elegans 4.48e-1	is elegans 2.26e-1 is elegans 5.60e-1	tis elegans 2.75e-1 tis elegans 4.48e-1	tis elegans 2.75e-1 s clone D.11 1.13e-1	clone DJ0 2.75e-1; s elegans 1.33e-1	is elegans 4.48e-1	tis elegans 8./8e-1
is elegans 7 866-2 is elegans 1.206-1 is elegans 3.306-1 is elegans 1.206-1 is elegans 1.706-1 is elegans 1.716-1 is elegans 1.718-1 is elegans 7.866-2	is elegans 7.86e-2 is elegans 1.20e-1 is elegans 3.30e-1 is elegans 1.20e-1	is elegans 1./1e-1 is elegans 1.20e-1 is elegans 4.23e-2 is elegans 4.23e-2	is elegans 3.30e-1 is elegans 2.26e-1 is elegans 2.26e-1	is elegans 2.26e-1 is elegans 1.33e-1	is elegans 2.26e-1 is elegans 2.26e-1	is elegans 5	is elegans 4.48e-1 is elegans 2.26e-1	is elegans 8.78e-1 is elegans 1.33e-1 is elegans 2.26e-1	is elegans 2.26e-1. is elegans 2.26e-1	is elegans 2.26e-1 is elegans 2.26e-1 is elegans 2.26e-1	is elegans 8.78e-1 is elegans 5.60e-1 is elegans 2.75e-1	is elegans 2.26e-1 is elegans 5.60e-1	is elegans 4.48e-1 is elegans 1.33e-1 is elegans 1.33e-1	is elegans 2.26e-1 is elegans 1.33e-1	is elegans 5.50e-1 is elegans 4.48e-1 is elegans 5.60e-1	is elegans 2.75e-1	is elegans 1.13e-1	is elegans 2.26e-1	is elegans 1.33e-1.	is elegans 4.48e-1	rhabditis elegans 4.48e-1	rhabditis elegans 2.26e-1 rhabditis elegans 5.60e-1	rhabditis elegans 2.75e-1 rhabditis elegans 4.48e-1	rhabditis elegans 2.75e-1	sapiens clone DJO 2.75e-1 prhabditis elegans 1.33e-1	is elegans 4.48e-1	ditis elegans 8./8e-1
is elegans 7 866-2 is elegans 1.206-1 is elegans 3.306-1 is elegans 1.206-1 is elegans 1.706-1 is elegans 1.716-1 is elegans 1.718-1 is elegans 7.866-2	is elegans 7.86e-2 is elegans 1.20e-1 is elegans 3.30e-1 is elegans 1.20e-1	is elegans 1./1e-1 is elegans 1.20e-1 is elegans 4.23e-2 is elegans 4.23e-2	is elegans 3.30e-1 is elegans 2.26e-1 is elegans 2.26e-1	is elegans 2.26e-1 is elegans 1.33e-1	is elegans 2.26e-1 is elegans 2.26e-1	is elegans 5	is elegans 4.48e-1 is elegans 2.26e-1	is elegans 8.78e-1 is elegans 1.33e-1 is elegans 2.26e-1	is elegans 2.26e-1. is elegans 2.26e-1	is elegans 2.26e-1 is elegans 2.26e-1 is elegans 2.26e-1	is elegans 8.78e-1 is elegans 5.60e-1 is elegans 2.75e-1	is elegans 2.26e-1 is elegans 5.60e-1	is elegans 4.48e-1 is elegans 1.33e-1 is elegans 1.33e-1	is elegans 2.26e-1 is elegans 1.33e-1	is elegans 5.50e-1 is elegans 4.48e-1 is elegans 5.60e-1	is elegans 2.75e-1	is elegans 1.13e-1	is elegans 2.26e-1	is elegans 1.33e-1.	is elegans 4.48e-1	rhabditis elegans 4.48e-1	rhabditis elegans 2.26e-1 rhabditis elegans 5.60e-1	rhabditis elegans 2.75e-1 rhabditis elegans 4.48e-1	tis elegans 2.75e-1 s clone D.11 1.13e-1	sapiens clone DJO 2.75e-1 prhabditis elegans 1.33e-1	orhabditis elegans 4.48e-1	enorhabditis elegans 8./8e-1
Caenorhabditis elegans 7.86e-2 Caenorhabditis elegans 1.20e-1 Caenorhabditis elegans 3.30e-1 Caenorhabditis elegans 1.20e-1 Caenorhabditis elegans 1.20e-1 Caenorhabditis elegans 1.71e-1 Caenorhabditis elegans 1.71e-1 Caenorhabditis elegans 7.86e-2 Caenorhabditis elegans 7.86e-2	Caenorhabditis elegans 7.86-2 Caenorhabditis elegans 1.20e-1 Caenorhabditis elegans 3.30e-1 Caenorhabditis elegans 1.20e-1	Caenornabditis elegans 1./1e-1 Caenorhabditis elegans 1.20e-1 Caenorhabditis elegans 4.23e-2 Caenorhabditis elegans 4.23e-2	Caenorhabditis elegans 3.30e-1 Caenorhabditis elegans 1.33e-1 Caenorhabditis elegans 2.26e-1	Caenorhabditis elegans 2.26e-1 Caenorhabditis elegans 1.33e-1	Caenorhabditis elegans 2.26e-1 Caenorhabditis elegans 2.26e-1	Caenorhabditis elegans 5	Caenorhabditis elegans 4.48e-1	Caenornabditis elegans 8.78e-1 Caenorhabditis elegans 1.33e-1 Caenorhabditis elegans 2.26e-1	Caenorhabditis elegans 2.26e-1 Caenorhabditis elegans 2.26e-1	Caenorhabditis elegans 2.26e-1 Caenorhabditis elegans 2.26e-1	Caenorhabditis elegans 8.78e-1 Caenorhabditis elegans 5.60e-1	Caenorhabditis elegans 2.26e-1	Caenorhabditis elegans 4.48e-1 Caenorhabditis elegans 1.33e-1 Caenorhabditis elegans 1.33e-1	Caenorhabditis elegans 2.26e-1 Caenorhabditis elegans 1.33e-1	Caenorhabditis elegans 5.50e-1 Caenorhabditis elegans 4.48e-1	Caenorhabditis elegans 2.75e-1	Caenorhabditis elegans 1.13e-1.	Caenorhabditis elegans 2.26e-1	Caenorhabditis elegans 1.33e-1	Caenorhabditis elegans 4.48e-1	Caenorhabditis elegans 4.48e-1	Caenorhabditis elegans 2.26e-1 Caenorhabditis elegans 5.60e-1	Caenorhabditis elegans 2.75e-1 Caenorhabditis elegans 4.48e-1	Caenorhabditis elegans 2.75e-1 Homo sapiens clone D.11 1.13e-1	Homo safetons clone DJO 2.75e-1 Caenorhabditis elegans 1.33e-1	Caenorhabditis elegans 4.48e-1	Caenorhabditis elegans 8./8e-1
Caenorhabditis elegans 7.866-2 Caenorhabditis elegans 1.206-1 Caenorhabditis elegans 3.306-1 Caenorhabditis elegans 1.206-1 Caenorhabditis elegans 1.206-1 Caenorhabditis elegans 1.716-1 Caenorhabditis elegans 1.718-1 Caenorhabditis elegans 7.866-2 Caenorhabditis elegans 7.866-2	Caenorhabditis elegans 7.86-2 Caenorhabditis elegans 1.20e-1 Caenorhabditis elegans 3.30e-1 Caenorhabditis elegans 1.20e-1	Caenornabditis elegans 1./1e-1 Caenorhabditis elegans 1.20e-1 Caenorhabditis elegans 4.23e-2 Caenorhabditis elegans 4.23e-2	Caenorhabditis elegans 3.30e-1 Caenorhabditis elegans 1.33e-1 Caenorhabditis elegans 2.26e-1	Caenorhabditis elegans 2.26e-1 Caenorhabditis elegans 1.33e-1	Caenorhabditis elegans 2.26e-1 Caenorhabditis elegans 2.26e-1	Caenorhabditis elegans 5	Caenorhabditis elegans 4.48e-1	Caenornabditis elegans 8.78e-1 Caenorhabditis elegans 1.33e-1 Caenorhabditis elegans 2.26e-1	Caenorhabditis elegans 2.26e-1 Caenorhabditis elegans 2.26e-1	Caenorhabditis elegans 2.26e-1 Caenorhabditis elegans 2.26e-1	Caenorhabditis elegans 8.78e-1 Caenorhabditis elegans 5.60e-1	Caenorhabditis elegans 2.26e-1	Caenorhabditis elegans 4.48e-1 Caenorhabditis elegans 1.33e-1 Caenorhabditis elegans 1.33e-1	Caenorhabditis elegans 2.26e-1 Caenorhabditis elegans 1.33e-1	Caenorhabditis elegans 5.50e-1 Caenorhabditis elegans 4.48e-1	Caenorhabditis elegans 2.75e-1	Caenorhabditis elegans 1.13e-1.	Caenorhabditis elegans 2.26e-1	Caenorhabditis elegans 1.33e-1	Caenorhabditis elegans 4.48e-1	Caenorhabditis elegans 4.48e-1	Caenorhabditis elegans 2.26e-1 Caenorhabditis elegans 5.60e-1	Caenorhabditis elegans 2.75e-1 Caenorhabditis elegans 4.48e-1	Caenorhabditis elegans 2.75e-1 Homo sapiens clone D.11 1.13e-1	Homo safetons clone DJO 2.75e-1 Caenorhabditis elegans 1.33e-1	Caenorhabditis elegans 4.48e-1	Caenorhabditis elegans 8./8e-1
19 AC006903 Caenorhabditis elegans 7.86e-2 20 AC006741 Caenorhabditis elegans 1.20e-1 19 CEY45F3 Caenorhabditis elegans 3.30e-1 19 AC006900 Caenorhabditis elegans 3.30e-1 19 AC006794 Caenorhabditis elegans 1.20e-1 19 AC006890 Caenorhabditis elegans 1.71e-1 20 AC006896 Caenorhabditis elegans 7.86e-2 20 AC006891 Caenorhabditis elegans 7.86e-2 20 AC006897 Caenorhabditis elegans 7.86e-2	19 AC006712 Caenorhabditis elegans 7.86e-2 19 AC006874 Caenorhabditis elegans 1.20e-1 19 AC006785 Caenorhabditis elegans 3.30e-1 19 CEY4665 Caenorhabditis elegans 1.20e-1	ZU ACU069U6 Caenorhabolitis elegans 1./18-1 19 AC006782 Caenorhabditis elegans 1.20e-1 19 CEY44A6 Caenorhabditis elegans 4.23e-2 19 AC006751 Caenorhabditis elegans 4.23e-2	19 ACO06751 Caenorhabditis elegans 3.30e-1 21 CELUNC60X Caenorhabditis elegans 1.33e-1 22 CEY5203 Caenorhabditis elegans 2.26e-1	21 CEYSOD3 Caenorhabditis elegans 2.26e-1 22 CELF53E2 Caenorhabditis elegans 1.33e-1	21 CEY39AlC Caenorhabditis elegans 2.26e-1 22 CELY49G5B Caenorhabditis elegans 2.26e-1	21 CEY81G3A Caenorhabditis elegans 5. 21 CELF17A9 Caenorhabditis elegans 4.	19 ACU0062/ Caenorhabditis elegans 4.48e-1 21 CEY43F4A Caenorhabditis elegans 2.26e-1 70 CETATORN 2000-1	ZI CELWOLFIZ CAENOINABOLIUS ELEGANS 8.78e-1 19 CEFUGOLI CAENOINABOLIUS ELEGANS 1.33e-1 19 CEFUGOLI CAENOINABOLIUS ELEGANS 2.256-1	21 CEF21A3 Caenorhabditis elegans 2.26e-1. 21 CEK11D9 Caenorhabditis elegans 2.26e-1.	1 CENTORES Caenorhabditis elegans 2.26e-1 22 CELF54E7 Caenorhabditis elegans 2.26e-1 22 CELF54E7 Caenorhabditis elegans 2.26e-1	21 CELKO3E5 Caenorhadditis elegans 8.78e-1 21 CELT22E3 Caenorhadditis elegans 5.60e-1 21 CELT2CA12 Caenorhahditis elegans 5.75e-1	21 CELFATHIO Caenorhabditis elegans 2.26e-1 21 CELMOIB12 Caenorhabditis elegans 5.60e-1	21 CELC44E4 Caenorhabditis elegans 4.48e-1 21 CELW0269 Caenorhabditis elegans 1.33e-1 21 CELC38C3 Caenorhabditis elegans 1.33e-1	21 CEXK1320 Caenorhabditis elegans 2.26e-1 21 CEM142 Caenorhabditis elegans 1.33e-1	21 CELWOIBIL Caenorhabortis elegans 5.50e-1 21 CELTO3F1 Caenorhaboltis elegans 4.48e-1 21 CENTO371 Caenorhaboltis elegans 5.60e-1	22 CELKOND Caenorhabditis elegans 2.75e-1.	21 CENTAGO Caemorinabattis elegans 2.75c-1. 21 CEC14A4 Caemorinabattis elegans 1.135-1. 21 CET#10E5 Caemoribabattis elegans 2.75c-1.	21 CELF53G12 Caemornabditis elegans 2.26e-1 21 CELF53G12 Caemornabditis elegans 2.26e-1 21 CFLCOTON	21 CECOLG6 Caenorhabditis elegans 1.33e-1. 22 CFIESO16 Caenorhabditis elegans 1.33e-1. 22 CFIESO17 Caenorhabditis elegans 5.60e-1	CENTRAL CACHOLING CACHOLIN	19 CEY57A10 Caenorhabditis elegans 4.48e-1	<pre>19 CEY81G3 Caenorhabditis elegans 2.26e-1 19 CEY21F11 Caenorhabditis elegans 5.60e-1</pre>	20 AC006888 Caenorhabditis elegans 2.75e-1 19 AC006710 Caenorhabditis elegans 4.48e-1	19 AC006732 Caenorhabditis elegans 2.75e-1 19 AC006324 Homo sabiens clone D.11 1.13e-1	19 AC004867 Home sapiens clone DJ0 2.75e-1 20 AC006895 Caenorhabditis elegans 1.33e-1	20 ACO06895 Caenorhabditis elegans 4.48e-1	19 ACU06/54 Caenorhabditis elegans 8./8e-1
274626 19 AC006903 Caenorhabditis elegans 7.86e-2 276615 19 AC006741 Caenorhabditis elegans 1.20e-1 296715 19 CEX45F3 Caenorhabditis elegans 1.20e-1 29730 19 AC006900 Caenorhabditis elegans 3.30e-1 297866 19 AC006794 Caenorhabditis elegans 1.20e-1 298195 19 AC006890 Caenorhabditis elegans 1.20e-1 298195 19 AC006896 Caenorhabditis elegans 1.71e-1 298300 20 AC006896 Caenorhabditis elegans 1.71e-1 299300 20 AC006896 Caenorhabditis elegans 1.71e-1 298300 20 AC006896 Caenorhabditis elegans 7.86e-2 36e-2 20006896 Caenorhabditis elegans 7.86e-2 20006896 Caeno	29919 19 AC006712 Caenorhabditis elegans 7.86e-2 306131 19 AC006874 Caenorhabditis elegans 1.20e-1 312267 19 AC006785 Caenorhabditis elegans 3.30e-1 315330 19 CEY4665 Caenorhabditis elegans 1.20e-1	11/81 ZO ACOUBSUD CARROTRABOLITIS ELEGANS 1:/18-1 319857 19 ACOU6782 Caenorhabditis elegans 1:20e-1 326074 19 CEY44A6 Caenorhabditis elegans 4:23e-2 340801 19 ACOU6751 Caenorhabditis elegans 4:23e-2	340801 19 ACO06751 Caenorhabditis elegans 3.30e-1 4906 21 CELUNG60X Caenorhabditis elegans 1.33e-1 8460 21 CEY5203 Caenorhabditis elegans 2.26e-1	8460 21 CEY52D3 Caenorhabditis elegans 2.26e-1 10556 22 CELF53E2 Caenorhabditis elegans 1.33e-1	18146 21 CEY39AlC Caenorhabditis elegans 2.26e-1 18655 22 CELY49G5B Caenorhabditis elegans 2.26e-1	20303 21 CEY81G3A Caenorhabditis elegans 5.20960 21 CELF17A9 Caenorhabditis elegans 4.	23928 19 ACU0662/ Caenorhabditis elegans 4.48e-1 23928 21 CEY43F4A Caenorhabditis elegans 2.26e-1	2012z 21 CELWOZFIZ CACHOFRAGOILIS CLEGANS 8./86-1. 29096 19 CEFCODD11 Cachorhabditis elegans 1.33e-1. 30225 21 CEFCOGI2 Cachorhabditis elegans 2.26e-1.	32096 21 CEF21A3 Caenorhabditis elegans 2.26e-1 32205 21 CEK11D9 Caenorhabditis elegans 2.26e-1	33238 21 CET06E6 Caenorhabditis elegans 2.26e-1	33883 21 CELKO3E5 Caenorhabditis elegans 8.78e-1 33963 21 CELT22F3 Caenorhabditis elegans 5.60e-1 34132 21 CELT276712 Caenorhabditis elegans 5.75e-1	34728 21 CELF41H10 Caenorhabditis elegans 2.26e-1 34907 21 CELMO1B12 Caenorhabditis elegans 5.60e-1	35169 21 CELC44E4 Caenorhabditis elegans 4.48e-1 35776 21 CELM02G9 Caenorhabditis elegans 1.33e-1 35855 21 CELC38G3 Caenorhabditis elegans 1.33e-1	35989 21 CEZK1320 Caenorhabditis elegans 2.26e-1 36306 21 CEM142 Caenorhabditis elegans 1.33e-1	36999 21 CELWOIBII Caenorhaboitis elegans 5.00e-1 38643 21 CELLO3FI Caenorhabditis elegans 4.48e-1 34086 21 CERCOA1 Caenorhabditis alegans 5.60e-1	39273 22 CELKOBD9 Caenorhabditis elegans 2.75e-1	39784 21 CEC14A4 Caenorhabditis elegans 1.13e-1.40A37 21 CEC14A6 Caenorhabditis elegans 2.75e-1.	41553 21 CELF53G12 Caenorhabditis clegans 2.26e-1 41553 21 CELF53G12 Caenorhabditis clegans 2.26e-1 71645 21 CELF53G12 Caenorhabditis clegans 4.48e-1	43410 21 CECO1G Caenorhabditis elegans 1.35-1 44412 21 CECO1G Caenorhabditis elegans 5.60e-1	78153 21 CEN53C10A Caenorhabditis elegans 4.48e-1	110000 19 CEYS7A10 Caenorhabditis elegans 4.48e-1	110000 19 CEY81G3 Caenorhabditis elegans 2.26e-1 112726 19 CEY21F11 Caenorhabditis elegans 5.60e-1	140702 20 AC006888 Caenorhabditis elegans 2.75e-1 145920 19 AC006710 Caenorhabditis elegans 4.48e-1	159453 19 AC006732 Caenorhabditis elegans 2.75e-1 163125 19 AC006324 Homo sapiens clone DTI 1.13e-1	173140 19 AC004867 Homo sapiens clone DJ0 2.75e-1 201746 20 AC006895 Caemorhabditis elecans 1.33e-1	201746 20 ACO06895 Caenorhabditis elegans 4.48e-1	20621/ 19 ACU06/54 Caenorhabditis elegans 8./8e-1
7. 274626 19 AC006903 Caenorhabditis elegans 7.868-2 7. 26829 20 AC006741 Caenorhabditis elegans 1.20e-1 7. 295290 19 AC006900 Caenorhabditis elegans 3.30e-1 7. 297070 19 CEY47H10 Caenorhabditis elegans 3.30e-1 7. 297070 19 CEV47H10 Caenorhabditis elegans 1.20e-1 7. 297086 19 AC006994 Caenorhabditis elegans 1.20e-1 7. 298960 20 AC006896 Caenorhabditis elegans 1.71e-1 7. 299300 20 AC006896 Caenorhabditis elegans 1.71e-1 7. 299300 20 AC006896 Caenorhabditis elegans 1.71e-1 7. 299300 20 AC006896 Caenorhabditis elegans 7.86e-2	7 29919 19 AC006712 Caenorhabditis elegans 7.86e-2 7 306131 19 AC006874 Caenorhabditis elegans 1.20e-1 7 312267 19 AC006785 Caenorhabditis elegans 3.30e-1 7 315330 19 CEY4665 Caenorhabditis elegans 1.20e-1	./ 31/781 20 ACU00906 Caenornabditis elegans 1./18-1. 7 319857 19 ACU06782 Caenornabditis elegans 1.20e-1. 7 326074 19 CEY44A6 Caenornabditis elegans 4.23e-2. 7 340801 19 ACU06751 Caenornabditis elegans 4.23e-2.	7 340801 19 AC006751 Caenorhabditis elegans 3.30e-1 6 4906 21 CELUNC60X Caenorhabditis elegans 1.33e-1 6 8460 21 CEYS2D3 Caenorhabditis elegans 2.26e-1	6 8460 21 CEY22D3 Caenorhabditis elegans 2.26e-1 6 10556 22 CELF53E2 Caenorhabditis elegans 1.33e-1	.6 18146 21 CEY39AlC Caenorhabditis elegans 2.26e-1 .6 18655 22 CELY49G5B Caenorhabditis elegans 2.26e-1	.6 20303 21 CEY81G3A Caenorhabditis elegans 5.6 20960 21 CELF17A9 Caenorhabditis elegans 4.	6 23928 21 CEV43784A Caenorhabditis elegans 4.486-1. 6 23928 21 CEV43784A Caenorhabditis elegans 2.266-1.	.o 2012.2 1 CELMVZFIZ CARNOIMAGAILIS ELEGANS 9.788-1. 6 29096 19 CEFC9D11 Caenorhabditis elegans 1.33e-1. 6 3025 21 CEFC9C12 Caenorhabditis elegans 2.26e-1.	.6 32096 21 CEF21A3 Caenorhabditis elegans 2.26e-1.6 32205 21 CEK11D9 Caenorhabditis elegans 2.26e-1.	o 3.212 21 CETOGEG Caenorhabditis elegans 2.26e-1. 6 33539 22 CELF54E7 Caenorhabditis elegans 2.26e-1.	.6 33883 21 CELKO3E5 Caenorhabditis elegans 8.788-1 .6 33953 21 CELT22F3 Caenorhabditis elegans 5.60e-1 .8 34132 31 CETT27673 Caenorhabditis elegans 5.75e-1	.6 34728 21 CELM41H10 Caenorhabditis elegans 5.26e-1 .6 34907 21 CELM01B12 Caenorhabditis elegans 5.60e-1	.6 35159 21 CELC44E4 Caenorhabditis elegans 4.48e-1 6 35776 21 CELC4002G9 Caenorhabditis elegans 1.33e-1 6 3565 21 CELC38C3 Caenorhabditis elegans 1.33e-1	.6 35989 21 CEZK1320 Caenorhabditis elegans 2.26e-1 .6 36006 21 CEM142 Caenorhabditis elegans 1.33e-1	.0 30599 21 CELWOIBII CAENOTRAROILIS ELEGANS 5.00E-1 6 38643 21 CELTOSFI CAENOTRARDAILIS ELEGANS 4.48E-1 6 39086 31 CFEROTA1 CAENOTRARAILIS ELEGANG	6 39273 22 CELKORD9 Caenorhabditis elegans 2.75e-1.	.6 39784 21 CECLARA Caenorhabditis elegans 1.13e-1.6 4.0437 21 CECLARA Caenorhabditis elegans 1.13e-1.	.6 41553 21 CELFS3G12 Caenorhabditis clegans 2.26e-1 6 41545 21 CELFS3G12 Caenorhabditis clegans 2.26e-1	41410 21 CECOLOS CARROLLIMANALLES ELEGANS 4.700 L 6 441410 21 CECOLOS CARROLLIMANALLES ELEGANS 1.338-1.	6 78153 21 CENSSCION Caenorhabditis elegans 4.48e-1	.6 110000 19 CEYS7A10 Caenorhabditis elegans 4.48e-1.	.6 110000 19 CEY81G3 Caenorhabditis elegans 2.26e-1 .6 112726 19 CEY21F11 Caenorhabditis elegans 5.60e-1	.6 140702 20 AC006888	.6 159453 19 AC006732 Caenorhabditis elegans 2.75e-1 .6 163125 19 AC006324 Homo sapiens clone D.T 1 13e-1	6 173140 19 AC004867 Homo sapiens clone DJ0 2.75e-1.6 201746 20 AC006895 Caenorhabditis elegans 1.33e-1.	6 201746 20 ACOO6895 Caenorhabditis elegans 4.48e-1	.6 20621/ 19 ACU06/54 Caenorhabditis elegans 8./8e-1 6 207270 10 ACU06700 Caenorhabditis elegans 1 13e-1
6 0.7 274626 19 AC006903 Caenorhabditis elegans 7.86e-2 3 0.7 276829 20 AC006741 Caenorhabditis elegans 7.86e-2 1 0.7 295791 19 CEY45F3 Caenorhabditis elegans 7.86e-2 3 0.7 297070 19 CEY477H10 Caenorhabditis elegans 3.30e-1 0.7 297070 19 CEY477H10 Caenorhabditis elegans 1.20e-1 0.7 297050 19 AC006990 Caenorhabditis elegans 1.20e-1 0.7 297050 20 AC006890 Caenorhabditis elegans 1.71e-1 5 0.7 29800 20 AC006891 Caenorhabditis elegans 1.71e-1 786e-2 AC006881 Caenorhabditis elegans 7.86e-2	0.7 299919 19 AC006712 Caenorhabditis elegans 7.86e-2 3 0.7 306131 19 AC006874 Caenorhabditis elegans 1.20e-1 1 0.7 312267 19 AC006785 Caenorhabditis elegans 3.30e-1 3 0.7 31530 19 CEY46G5 Caenorhabditis elegans 1.20e-1	0 0.7 317/81 20 ACU06906 Caenornaboltis elegans 1.718-13 0.7 319857 19 AC006782 Caenornabditis elegans 1.20e-15 0.7 326674 19 CEY44A6 Caenornabditis elegans 4.23e-25 0.7 340801 19 AC006751 Caenornabditis elegans 4.23e-2	1 0.7 340801 19 AC006751 Caenorhabditis elegans 3.30e-1 3 0.6 4906 21 CELUNC60X Caenorhabditis elegans 1.33e-1 0.6 8460 21 CEY52D3 Caenorhabditis elegans 2.26e-1	7 0.6 8460 21 CRY52D3 Caenorhabditis elegans 2.26e-1 3 0.6 10556 22 CELF53E2 Caenorhabditis elegans 1.33e-1	7 0.6 18146 21 CEY39AlC Caenorhabditis elegans 2.26e-1 7 0.6 18655 22 CELY49G5B Caenorhabditis elegans 2.26e-1	5 0.6 20303 21 CEY81G3A Caenorhabditis elegans 5.8 0.6 20960 21 CELF17A9 Caenorhabditis elegans 4.	0.6 233483 19 ACUU062/ Caenorhadditis elegans 4.48e-1 0.6 23928 21 CEF42F4A Caenorhabditis elegans 2.26e-1	0.6 20042 21 CELMUCKIZ CARROGIABODITIS ELEGANS 9.788-1 0.6 20096 19 CEKO9D11 Caenorhabditis elegans 1.33e-1 0.6 3025 21 CERP3G12 CAERORPARDITIS elegans 2.26e-1	7 0.6 32096 21 CEF21A3 Caenorhabditis elegans 2.26e-1.	0.6 33238 21 CETO6E6 Caenorhabditis elegans 2.26e-1	9 0.6 33883 21 CELKO3E5 Caenorhabditis elegans 8.788-1 5 0.6 33963 21 CELT22F3 Caenorhabditis elegans 5.60e-1 4 0.6 34132 31 CETT26717 Caenorhabditis elegans 5.75e-1	7 0.6 34728 21 CELF41H10 Caenorhabditis elegans 2.26e-1 5 0.6 34907 21 CELM01B12 Caenorhabditis elegans 5.60e-1	0.6 35169 21 CELC44E4 Caenorhabditis elegans 4.48e-1 0.6 35776 21 CELCM02G9 Caenorhabditis elegans 1.33e-1 0.6 35855 21 CELC38C3 Caenorhabditis elegans 1.33e-1	7 0.6 35989 21 CEZK1320 Caenorhabditis elegans 2.26e-1 3 0.6 36006 21 CEM142 Caenorhabditis elegans 1.33e-1	0.6 38643 21 CELMOLBII CARNOITABOAILIS ELEGANS 5.608-1 0.6 38643 21 CELTIOSFI CARRONTABDAİLIS ELEGANS 4.488-1 0.6 3008 21 CERTIAL CARRONTABAİLIS ALDARANS 5.608-1	4 0.6 39273 22 CELKOBD9 Caenorhabditis elegans 2.75e-1	6 0.6 39784 21 CECIARA Caenorhabditis elegans 1.13e-1.	7 0.6 41553 21 CELF53G12 Caenorinactris cregans 2.70c 1 8 0.6 415531 CELF53G12 Caenorinabditis elegans 2.26e-1	3 0.6 41410 21 CECOLOG Caenorhabditis elegans 1.33e-1.5 0.6 4413 22 22 CECOLOG Caenorhabditis elegans 1.33e-1.5 0.6 44132 22 CECOLOG Caenorhabditis elegans 5.60e-1.	8 0.6 78153 10 CEVESCIOR Commontant and a 4.48e-1	4 0.6 110000 19 CEYS7A10 Caenorhabditis elegans 4.48e-1	7 0.6 110000 19 CEY81G3 Caenorhabditis elegans 2.26e-1 5 0.6 112726 19 CEY21F11 Caenorhabditis elegans 5.60e-1	4 0.6 140702 20 AC006888 Caenorhabditis elegans 2.75e-1 8 0.6 145920 19 AC006710 Caenorhabditis elegans 4.48e-1	4 0.6 159453 19 AC006732 Caenorhabditis elegans 2.75e-1 6 0.6 163125 19 AC006324 Homo sapiens clone DAT 1.13e-1	0.6 173140 19 ACO04867 Homo sapiens clone DJ0 2.75e-1	0 0.6 201746 20 ACO06895 Caenorhabditis elegans 4.48e-1	9 0.6 20621/ 19 ACU06/54 Caenorhabditis elegans 8.78e-1 6 0.6 207370 10 AC006709 Caenorhabditis alogans 1 13e-1
1s elegans 7 86e-2 1s elegans 1.20e-1 1s elegans 3.30e-1 1s elegans 1.20e-1 1s elegans 1.71e-1 1s elegans 1.71e-1 1s elegans 1.71e-1 1s elegans 1.78e-1 1s elegans 1.86e-2	56 0.7 299919 19 AC006712 Caenorhabditis elegans 7.86e-2 53 0.7 306131 19 AC006874 Caenorhabditis elegans 1.20e-1 51 0.7 312267 19 AC006785 Caenorhabditis elegans 3.30e-1 53 0.7 315330 19 CEY46G5 Caenorhabditis elegans 1.20e-1	50 0.7 317781 20 ACU00906 Caenornabditis elegans 1.718-1 53 0.7 319857 19 ACU06782 Caenorhabditis elegans 1.20e-1 55 0.7 326074 19 CEY44A6 Caenorhabditis elegans 4.23e-2 55 0.7 340801 19 ACU06751 Caenorhabditis elegans 4.23e-2	51 0.7 340801 19 AC006751 Caenorhabditis elegans 3.30e-1 43 0.6 4906 21 CELUNCGOX Caenorhabditis elegans 1.33e-1 47 0.6 8460 21 CEY\$2D3 Caenorhabditis elegans 2.26e-1	47 0.6 8460 11 CFY52D3 Caenorhabditis elegans 2.26e-1 43 0.6 10556 22 CELF53E2 Caenorhabditis elegans 1.33e-1	47 0.6 18146 21 CEY39AlC Caenorhabditis elegans 2.26e-1 47 0.6 18655 22 CELX49G5B Caenorhabditis elegans 2.26e-1	45 0.6 20303 21 CEY81G3A Caenorhabditis elegans 5.	48 0.6 23483 19 ACUU662/ Caenornabditis elegans 4.486-1 47 0.6 23928 21 CEY4374A Caenornabditis elegans 2.266-1	49 0.0 2012/ 21 CELWOZFIZ CAENOTABDAILLS ELEGANS 9.788-1 43 0.6 29096 19 CEFCO9D11 Caenotrabditis elegans 1.338-1 47 0.6 30225 21 CEFCOGL3 CAENOTRABDAITIS elegans 2.268-1	47 0.6 32096 21 CEF21A3 Caenorhabditis elegans 2.26e-1 47 0.6 32205 21 CEK11D9 Caenorhabditis elegans 2.26e-1	47 0.6 33539 22 CELE54E7 Caenorhabditis elegans 2.26e-1	49 0.6 33883 21 CELKO3E5 Caenorhabditis elegans 8.788-1 45 0.6 33963 21 CELT22F3 Caenorhabditis elegans 5.60e-1 44 0.6 34132 21 CELT27F7 Caenorhabditis elegans 5.75e-1	47 0.6 34728 21 CELF41H10 Caenorhabditis elegans 2.26e-1 45 0.6 34907 21 CELM01B12 Caenorhabditis elegans 5.60e-1	48 0.6 35169 21 CELC44E4 Caenorhabditis elegans 4.48e-1 43 0.6 35776 21 CELW02G9 Caenorhabditis elegans 1.33e-1 43 0.6 35855 21 CELC38C3 Caenorhabditis elegans 1.33e-1	47 0.6 35989 21 CEZK1320 Caenorhabditis elegans 2.26e-1 43 0.6 36306 21 CEM142 Caenorhabditis elegans 1.33e-1	43 U.o 36999 Z1 CELWUIBII Caenornabditis elegans 5.6U8-1 48 U.6 38643 Z1 CELTGORI Caenorhabditis elegans 4.48e-1 45 O 6 34086 21 CERTORI Caenorhabditis elegans 4.6De-1	44 0.6 39273 22 CELKORD9 Caenorhabditis elegans 2.75e-1	46 0.6 39787 21 CENTAGE Caenorhabditis elegans 1.13e-1.	47 0.6 41553 21 CELF53G12 Caenorhabditis elegans 2.26e-1 A8 0.6 41545 21 CELF53G12 Caenorhabditis elegans 2.26e-1	43 0.6 434132 22 CCOLGG Caenorhabditis elegans 1.33e-1 45 0.6 434132 22 FFF52017 Caenorhabditis elegans 5.60e-1	48 0.6 78152 1 CENSICIAN Caenorimodicis elegans 4.48e-1	44 0.6 110000 19 CEY57A10 Caenorhabditis elegans 4.48e-1	47 0.6 110000 19 CEY81G3 Caenorhabditis elegans 2.26e-1 45 0.6 112726 19 CEY21F11 Caenorhabditis elegans 5.60e-1	44 0.6 140702 20 ACO06888 Caenorhabditis elegans 2.75e-1 48 0.6 145920 19 ACO06710 Caenorhabditis elegans 4.48e-1	44 0.6 159453 19 AC006732 Caenorhabditis elegans 2.75e-1 46 0.6 163125 19 AC006324 Homo sapiens clone Dil 1.13e-1	44 0.6 173140 19 AC004867 Home sapiens clone DJO 2.75e-1 43 0.6 201746 20 AC006895 Caenorhabditis elegans 1.33e-1	48 0.6 201746 20 ACOOG895 Caenorhabditis elegans 4.48e-1	49 0.6 20621/ 19 ACO06/54 Caenornabditis elegans 8.78e-1

υυ

2. 500e-0.6 2. 500e-0.6 2. 500e-0.6 2. 500e-0.6 3. 506e-0.7 3. 506e-0.7 4. 506e-0.7 5. 506e-0.7 6. 50	
s elegans s elegans	1
aenorhabditis aenorhabditis	
ACO06645 CECC05F9 CECC05F9 CELC24H12 CELC24H12 CELC24H12 CELC24H12 CEF52F12 CEF56A7A CEF56A7A CEF6A7A	
4 4 2 2 5 3 4 2 1 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1
$\frac{1}{1}$	<u>'</u>
33333333333333333333333333333333333333	
	_
	1
6. 55.966 5. 956 6. 1. 356 7. 1. 35	
elegans elegan	tis elegans
Caenorhabditis elegans Caenorhabditis elegans	aenornabdıtıs eleyans
CELROZFII Caenorhabditis elegans CEXTOTO. Caenorhabditis elegans CEXTOTO. Caenorhabditis elegans CEXTOTO. Caenorhabditis elegans CELROSII Caenorhabditis elegans CELROSII Caenorhabditis elegans CELROSII Caenorhabditis elegans CELTOSIB Caenorhabditis elegans CELTOSIB Caenorhabditis elegans CELTOSIB Caenorhabditis elegans CERTOSI CAENORHA Caenorhabditis elegans CERTOSI CAENORHA CAE	CEFZBFB Caenornabditis elegans
33270 21 CELROZFI1 Caenorhabditis elegans 33477 21 CETO7C4 Caenorhabditis elegans 33477 21 CETO7C4 Caenorhabditis elegans 33572 21 CETO721 Caenorhabditis elegans 33520 21 CETO721 Caenorhabditis elegans 33520 21 CETO721 Caenorhabditis elegans 34256 21 CELROSPO Caenorhabditis elegans 34256 21 CELROSPO Caenorhabditis elegans 34575 22 CELROSPO Caenorhabditis elegans 35516 21 CELROSPO Caenorhabditis elegans 35516 21 CELROSPO Caenorhabditis elegans 35516 21 CELROSPO Caenorhabditis elegans 35516 21 CELROSPO Caenorhabditis elegans 35516 21 CELROSPO Caenorhabditis elegans 35516 21 CELROSPO Caenorhabditis elegans 35516 21 CELROSPO Caenorhabditis elegans 35516 21 CELROSPO Caenorhabditis elegans 35516 21 CELROSPO Caenorhabditis elegans 35516 21 CELROSPO Caenorhabditis elegans 35516 21 CELROSPO Caenorhabditis elegans 35516 21 CELROSPO Caenorhabditis elegans 35516 21 CELROSPO Caenorhabditis elegans 35516 21 CELROSPO Caenorhabditis elegans 35516 21 CELROSPO Caenorhabditis elegans 3733 21 CELROSPO Caenorhabditis elegans 3733 21 CELROSPO Caenorhabditis elegans 3751 21 CELROSPO Caenorhabditis elegans 3751 21 CELCOSPO CAENORHADDITIS elegans 3751 21 CELCOSPO CAENORHAD	42391 21 CEF28F8 Caenornabditis elegans
CELROZFI1 Caenorhabditis elegans CETOTC4 Caenorhabditis elegans CETOTC4 Caenorhabditis elegans CECTOTC4 Caenorhabditis elegans CECTOTC4 Caenorhabditis elegans CECTOTC5 CENTORI CAENORDIS Caenorhabditis elegans CELTOZEN CELTOZEN CAENORDITIS elegans CAENORDITIS elegans CAE	0.5 42391 21 CEF28F8 Caenornabditis elegans

1.1.e - 0.5	
116.07.7.1.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.	
aenorhabditid ae	
Caenorhabdit Caenorhabditi Caenorhabditi	
a b b b b b b b b b b	
7256Ak 4400000000000000000000000000000000000	
CELF26A8 CELF54D11 CELF54D11 CELF54D11 CELF24D11 CELF24D11 CELF24D11 CELF28H1 CECMO672 CELT21E3 CELT21E3 CELT21E3 CELT21E3 CELT21E3 CELT312A CELT312A CELT312A CELT312A CELT312A CELT312A CELT312A CELT312A CELT312A CELT312A CELT312A CELT312A CELT312A CELT313A CELT312A CELT313A CELT313A CELT313A CELT313A CELT313A CELT31A	
$\pm 12.011111111111111111111111111111111111$	
2331113 22331113 22331113 22331113 22331113 22331113 22331113 22331113 2233113 23331313 2333131 2333131 2333131 2333131 233313131 23331 23331	
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
000000000000000000000000000000000000000	
75 17 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	
$\begin{array}{c} 444444444444444444444444444444444444$	
00 00000 00 00 0 0 0 0 0 0 0 0 0 0 0 0 0	
200	
ららようさらのこうさん うらっしょうりょうきょうしょう カイストラー・サース サイン・マン・ス・ス・ス・ス・ス・ス・ス・ス・ス・ス・ス・ス・ス・ス・ス・ス・ス・ス	
elegans 5 elegans 5 elegans 5 elegans 5 elegans 5 elegans 1 elegans 1 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 3 elegans 1 elegans 1 elegans 2 elegans 3 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegan	
elegans 5 elegans 5 elegans 5 elegans 5 elegans 5 elegans 1 elegans 1 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 3 elegans 1 elegans 1 elegans 2 elegans 3 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegan	
elegans 5 elegans 5 elegans 5 elegans 5 elegans 5 elegans 1 elegans 1 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 3 elegans 1 elegans 1 elegans 2 elegans 3 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegan	
elegans 5 elegans 5 elegans 5 elegans 5 elegans 5 elegans 1 elegans 1 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 3 elegans 1 elegans 1 elegans 2 elegans 3 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegan	
elegans 5 elegans 5 elegans 5 elegans 5 elegans 5 elegans 1 elegans 1 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 3 elegans 1 elegans 1 elegans 2 elegans 3 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegans 2 elegan	
Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans	
Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans	
CEY4816 Caenorhabditis elegans CEY4816 Caenorhabditis elegans AC006896 Caenorhabditis elegans AC006896 Caenorhabditis elegans AC006896 Caenorhabditis elegans AC006898 Caenorhabditis elegans AC006898 Caenorhabditis elegans AC006896 Caenorhabditis elegans AC006896 Caenorhabditis elegans AC006896 Caenorhabditis elegans CEY57816 Caenorhabditis elegans CEY6717 Caenorhabditis elegans CERFA118 Caenorhabditis elegans CERFA118 Caenorhabditis elegans CERFA118 Caenorhabditis elegans CERFA118 Caenorhabditis elegans CERFA118 Caenorhabditis elegans CERFA118 Caenorhabditis elegans CERFA118 Caenorhabditis elegans CERFA118 Caenorhabditis elegans CERFA118 Caenorhabditis elegans CERFA118 Caenorhabditis elegans CERFA118 Caenorhabditis elegans CERFA118 Caenorhabditis elegans CERFA118 Caenorhabditis elegans CERFA118 CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA CAENORA	
19 CEY48A6 Caenorhabditis elegans 519 CEY48A6 Caenorhabditis elegans 519 CEY48A6 Caenorhabditis elegans 519 AC006794 Caenorhabditis elegans 519 AC006889 Caenorhabditis elegans 519 AC006889 Caenorhabditis elegans 519 AC006889 Caenorhabditis elegans 519 AC006760 Caenorhabditis elegans 519 AC006760 Caenorhabditis elegans 519 AC006760 Caenorhabditis elegans 519 CEY4655 Caenorhabditis elegans 519 CEY4655 Caenorhabditis elegans 519 CEY4651 Caenorhabditis elegans 519 CEY4651 Caenorhabditis elegans 519 CEY4651 Caenorhabditis elegans 519 CEY4651 Caenorhabditis elegans 510 CEY588 Caenorhabditis elegans 510 CEY5881 Caenorhabditis elegans 510 CEY5881 Caenorhabditis elegans 510 CEY5881 Caenorhabditis elegans 510 CEY5881 Caenorhabditis elegans 510 CEY5881 Caenorhabditis elegans 510 CEY5881 Caenorhabditis elegans 510 CEY5881 Caenorhabditis elegans 510 CEY5881 Caenorhabditis elegans 510 CEY5881 Caenorhabditis elegans 510 CEY5881 Caenorhabditis elegans 510 CEY5881 Caenorhabditis elegans 510 CEY5881 Caenorhabditis elegans 510 CEY5881 Caenorhabditis elegans 510 CEY5881 Caenorhabditis elegans 510 CEY5881 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768 Caenorhabditis elegans 510 CEY6768	
1822 19 ACO06796 Caenorhabditis elegans 5659 19 CEX48EL Caenorhabditis elegans 5659 19 CEX48EL Caenorhabditis elegans 5707 19 CEX48EL Caenorhabditis elegans 5702 19 ACO06996 Caenorhabditis elegans 5702 19 ACO06996 Caenorhabditis elegans 5719 19 ACO06986 Caenorhabditis elegans 5719 19 ACO06760 Caenorhabditis elegans 5719 19 ACO06760 Caenorhabditis elegans 5719 19 ACO06760 Caenorhabditis elegans 5719 19 ACO06760 Caenorhabditis elegans 5719 19 ACO06760 Caenorhabditis elegans 5719 19 ACO06760 Caenorhabditis elegans 5719 19 ACO06760 Caenorhabditis elegans 5719 19 ACO06760 Caenorhabditis elegans 5719 19 ACO06760 Caenorhabditis elegans 5719 19 CEX78C1 Caenorhabditis elegans 6719 10 CEX78C1 Caenorhabditis elegans 6719 10 CEX78C1 Caenorhabditis elegans 6710 CEX78C1 CAENORH	
2 291622 19 ACONG6796 Caenorhabditis elegans 5 292663 10 CEX4816 Caenorhabditis elegans 1.5 297660 19 CEX4816 Caenorhabditis elegans 1.5 299802 19 CEX4816 Caenorhabditis elegans 1.5 299802 19 CEX4816 Caenorhabditis elegans 1.5 299308 19 ACONG689 Caenorhabditis elegans 2.5 299308 19 ACONG689 Caenorhabditis elegans 2.5 299719 19 ACONG680 Caenorhabditis elegans 2.5 299719 19 ACONG670 Caenorhabditis elegans 2.5 299719 CEX7811 Caenorhabditis elegans 2.5 299719 CEX7811 Caenorhabditis elegans 2.5 299719 CEX7811 Caenorhabditis elegans 2.5 299719 CEX7811 Caenorhabditis elegans 2.5 299719 CEX7811 Caenorhabditis elegans 3.5 CER781 CAENORHAD Caelorhabditis elegans 3.5 CER781 CAENORHAD Caelorhabditis elegans 3.5 CER781 CAENORHAD Caelorhabditis elegans 3.5 CER781 CAENORHAD Caenorhabditis elegans 3.5 CER781 CAENORHAD CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITI	
0.5 291622 19 CCX48E1 Caenorhabditis elegans 5 0.5 296599 19 CCX48E1 Caenorhabditis elegans 6 0.5 295669 19 CCX48E Caenorhabditis elegans 7 0.5 299802 19 ACO0689 Caenorhabditis elegans 8 0.5 299802 19 ACO0689 Caenorhabditis elegans 8 0.5 299802 19 ACO0689 Caenorhabditis elegans 8 0.5 299802 19 ACO0689 Caenorhabditis elegans 8 0.5 299802 19 ACO0689 Caenorhabditis elegans 8 0.5 299802 19 ACO0689 Caenorhabditis elegans 8 0.5 399802 19 ACO0689 Caenorhabditis elegans 8 0.5 398802 19 CCX57H2 Caenorhabditis elegans 9 0.5 398802 19 CCX57H2 Caenorhabditis elegans 10.5 398802 19 CCX57H2 Caenorhabditis elegans 10.5 398802 19 CCX57H2 Caenorhabditis elegans 10.5 39862 19 CCX77H2 Caenorhabditis elegans 10.5 398802 19 CCX77H2 Caenorhabditis elegans 10.5 398802 19 CCX77H2 Caenorhabditis elegans 10.5 398802 19 CCX77H2 Caenorhabditis elegans 10.4 3998 22 CCCX7H3 Caenorhabditis elegans 10.4 3998 22 CCCX7D3 Caenorhabditis elegans 10.4 3998 22 CCCX7D3 CAENORHADDITIS elegans 10.4 3998	
2 291622 19 ACONG6796 Caenorhabditis elegans 5 292663 10 CEX4816 Caenorhabditis elegans 1.5 297660 19 CEX4816 Caenorhabditis elegans 1.5 299802 19 CEX4816 Caenorhabditis elegans 1.5 299802 19 CEX4816 Caenorhabditis elegans 1.5 299308 19 ACONG689 Caenorhabditis elegans 2.5 299308 19 ACONG689 Caenorhabditis elegans 2.5 299719 19 ACONG680 Caenorhabditis elegans 2.5 299719 19 ACONG670 Caenorhabditis elegans 2.5 299719 CEX7811 Caenorhabditis elegans 2.5 299719 CEX7811 Caenorhabditis elegans 2.5 299719 CEX7811 Caenorhabditis elegans 2.5 299719 CEX7811 Caenorhabditis elegans 2.5 299719 CEX7811 Caenorhabditis elegans 3.5 CER781 CAENORHAD Caelorhabditis elegans 3.5 CER781 CAENORHAD Caelorhabditis elegans 3.5 CER781 CAENORHAD Caelorhabditis elegans 3.5 CER781 CAENORHAD Caenorhabditis elegans 3.5 CER781 CAENORHAD CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITIS elegans 3.5 CER781 CAENORHADITI	
0.5 291622 19 CCX48E1 Caenorhabditis elegans 5 0.5 296599 19 CCX48E1 Caenorhabditis elegans 6 0.5 295669 19 CCX48E Caenorhabditis elegans 7 0.5 299802 19 ACO0689 Caenorhabditis elegans 8 0.5 299802 19 ACO0689 Caenorhabditis elegans 8 0.5 299802 19 ACO0689 Caenorhabditis elegans 8 0.5 299802 19 ACO0689 Caenorhabditis elegans 8 0.5 299802 19 ACO0689 Caenorhabditis elegans 8 0.5 299802 19 ACO0689 Caenorhabditis elegans 8 0.5 399802 19 ACO0689 Caenorhabditis elegans 8 0.5 398802 19 CCX57H2 Caenorhabditis elegans 9 0.5 398802 19 CCX57H2 Caenorhabditis elegans 10.5 398802 19 CCX57H2 Caenorhabditis elegans 10.5 398802 19 CCX57H2 Caenorhabditis elegans 10.5 39862 19 CCX77H2 Caenorhabditis elegans 10.5 398802 19 CCX77H2 Caenorhabditis elegans 10.5 398802 19 CCX77H2 Caenorhabditis elegans 10.5 398802 19 CCX77H2 Caenorhabditis elegans 10.4 3998 22 CCCX7H3 Caenorhabditis elegans 10.4 3998 22 CCCX7D3 Caenorhabditis elegans 10.4 3998 22 CCCX7D3 CAENORHADDITIS elegans 10.4 3998	

0 0 0 0

000 0 000

00 0 0

1. 94e-04 1. 11e-05 1. 11e-05 1. 12e-05 1. 21e-02 1. 24e-04 1. 11e-05 1. 11e	1.21e-02 1.21e-02 1.21e-02 1.21e-02 1.21e-02 1.21e-03 3.12e-03 3.12e-03	3 12e-03 1 787e-04 1 787e-04 1 11e-05 3 12e-03 3 12e-05 1 11e-05 1 10e-01 1 10e-05 1 10e-04 1 10e-05 1 11e-05 1	
elegan elegan elegan elegan elegan elegan elegan elegan elegan elegan	s elegans s elegans s elegans s elegans s elegans s elegans s elegans s elegans s elegans	s elegans s elegans s elegans s elegans s elegans s elegans s elegans s elegans s elegans s elegans s elegans s elegans s elegans s elegans s elegans s elegans s elegans s elegans s elegans s elegans s elegans s elegans s elegans	is elegans is elegans
venorhabditii venorhabditii venorhabditii venorhabditii venorhabditii venorhabditii venorhabditii venorhabditii venorhabditii venorhabditii venorhabditii venorhabditii venorhabditii venorhabditii venorhabditii venorhabditii venorhabditii venorhabditii venorhabditii venorhabditii venorhabditii	Caenorhabditu Caenorhabditu Caenorhabditu Caenorhabditu Caenorhabditu Caenorhabditu Caenorhabditu Caenorhabditu Caenorhabditu Caenorhabditu Caenorhabditu	Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis	Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis Caenorhabditis
CEF36D3 CEF41D3 CEF41D3 CEF60G6 CEC36F7 CEF52G2 CEF52G2 CEF52G2 CEF52G2 CEF52G2 CEF52G2 CEF613D10 CEF13D12 CEF13D12 CEF13D12 CEF13D12 CEF13D12 CEF12C1 CEF22C1	CELCO4F5 CELCO4F5 CELCO4F5 CEB0019 CEE03H4 CEEC03H4 CELC54E4 CECC48D1 CELC54E4 CERC6611	CELD1044 CELD1044 CECC9410 CEF55C5 CEF55C5 CEF32B12B CEM03C11 CELC41D11 CELC41D11 CELC41D11 CELC40D1 CELC42B1 CELC42B1 CELC42B1 CELC42B1 CELC4B1 CELCA2B1 CELCA2B1 CELCA2B1 CELCA2B1 CELCAB1 CELCAB1	1 CELCIBES 1 CELCIBES 1 CELCIBAS 2 CELCIBAS 2 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 1 CELCISAS 2 CELFESCIS 1 CELCISAS 2 CELFESCIS 2 CELFESCIS 2 CELFESCIS 2 CELCISAS 2 CELFESCIS 3 CELCISAS 3 CELC
99990 21 99030 21 19211 21 19211 21 19235 21 19271 21 19271 21 19371 21 19371 21 19371 21 19371 21 19371 21 19371 21 19371 21 19371 21	39752 2239752 2239752 2239750 2139902 2139903 2139903 2139903 2139903 2139903 2139903 2139903 2139903 2139903 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 21399090909 2139909 2139909 2139909 2139909 2139909 2139909 2139909 2139	40001 2.2 400053 2.2 400553 2.2 400553 2.2 400553 2.2 400512 2.2 40012 2.2 40012 2.2 40012 2.2 41007 2.2 41100 2.2 41100 2.2 41100 2.2 41100 2.2 41100 2.2 41100 2.2 41100 2.2 41100 2.2 41100 3.2 41100 3.2	42171 21 42171 21 42405 21 42426 22 42472 21 42521 21 42521 21 42703 21 42703 21 42703 21 42703 21 42703 21 42703 21 42703 21 42703 21 42703 21 42703 21 42703 21 42703 21 42703 21 42703 21 42703 21 42703 21 42703 21 42703 21 42703 21 42703 21 42703 21 42703 21
			44444444444444444444
77777777777777777777777777777777777777	8 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	20110000000000000000000000000000000000	00000000000000000000000000000000000000
C C C 598 C C C 600 C C 600 C C C C C C C C C C C C C C C C C C C	6113 6114 6116 6116 6210 622	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
4.70e-05 4.70e-05 11.70e-01 11.10e-01 11.11e-03 3.12e-03 4.59e-04 11.94e-04 11.94e-04 11.94e-04 11.94e-04 11.70e-05 4.70e-05 4.70e-05	444444	44474444444664444444444444444444444444	4.59e-02 1.11e-05 1.11e-05 1.70e-01 4.70e-05 4.70e-05 4.70e-05 4.70e-05 1.94e-04 3.12e-03 4.70e-05 4.59e-02 1.11e-05 1.11e-05 1.21e-03 3.12e-03 3.12e-03 1.21e-03 1.21e-03
Jans 4.7 Jans 4.7 Jans 4.7 Jans 1.7 Jan	egans 1. egans 1. egans 1. egans 7.	allegans 4.5 blegans 4.7 blegans 4.7 blegans 7.8 blegans 1.2 blegans 1.2 blegans 1.2 blegans 1.3 blegans 1.3 blegans 1.3 blegans 1.3 blegans 7.8 blegans 7.8 blegans 7.8 blegans 1.8 blega	llegans 4. llegans 4. llegans 1. llegans 1. llegans 1. llegans 4. llegans 4. llegans 4. llegans 4. llegans 1. llegans 3.
s elegans 4.7. Is elegans 4.7. Is elegans 1.7. Is elegans 1.7. Is elegans 7.8. Is elegans 1.8. Is elegans 1.8. Is elegans 4.7. Is elegans 4.8. Is elegans 4.8. Is elegans 4.8.	is elegans 1. Is elegans 1. Is elegans 1. Is elegans 1. Is elegans 4. Is elegans 7.	elegans 4.5 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 7.8 elegans 7.8 elegans 1.8 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegans 1.7 elegan	elegans 4 elegans 1 elegans 1 elegans 1 elegans 4 elegans 4 elegans 7 elegans 4 elegans 4 elegans 4 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 1 elegans 3
caenorhabditis elegans 4.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 7.7 Caenorhabditis elegans 7.7 Caenorhabditis elegans 7.7 Caenorhabditis elegans 7.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 4.7 Caenorhabditis elegans 4.7 Caenorhabditis elegans 4.7 Caenorhabditis elegans 7.7 Caenorhabditis elegans 8.7 Caenorhabditis elegan	Caenorhabditis elegans 1. Caenorhabditis elegans 1. Caenorhabditis elegans 1. Caenorhabditis elegans 1. Caenorhabditis elegans 4. Caenorhabditis elegans 7.	Caenorhabditis elegans 4.5 Caenorhabditis elegans 4.7 Caenorhabditis elegans 1.1 Caenorhabditis elegans 7.8 Caenorhabditis elegans 1.2 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 7.8 Caenorhabditis elegans 7.8 Caenorhabditis elegans 7.8 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7 Caenorhabditis elegans 1.7	Caenorhabditis elegans 4 Caenorhabditis elegans 6 Caenorhabditis elegans 1 Caenorhabditis elegans 1 Caenorhabditis elegans 7 Caenorhabditis elegans 7 Caenorhabditis elegans 4 Caenorhabditis elegans 4 Caenorhabditis elegans 4 Caenorhabditis elegans 4 Caenorhabditis elegans 7 Caenorhabditis elegans 7 Caenorhabditis elegans 7 Caenorhabditis elegans 7 Caenorhabditis elegans 1 Caenorhabditis elegans 1 Caenorhabditis elegans 1 Caenorhabditis elegans 1 Caenorhabditis elegans 1 Caenorhabditis elegans 1 Caenorhabditis elegans 1 Caenorhabditis elegans 1 Caenorhabditis elegans 1 Caenorhabditis elegans 1 Caenorhabditis elegans 7 Caenorhabditis elegans 7 Caenorhabditis elegans 3 Caenorhabditis elegans 3 Caenorhabditis elegans 3 Caenorhabditis elegans 3
CELZC404 Caenorhabditis elegans 4.7 CETZ4H10 Caenorhabditis elegans 1.7 CEC24B9 Caenorhabditis elegans 1.7 CEC44B9 Caenorhabditis elegans 1.7 CEC44B9 Caenorhabditis elegans 1.7 CELMORT Caenorhabditis elegans 7.8 CELMORT Caenorhabditis elegans 7.8 CELMOIB12 Caenorhabditis elegans 7.8 CELMOIB12 Caenorhabditis elegans 7.8 CELMOIB12 Caenorhabditis elegans 7.8 CELWOID13 Caenorhabditis elegans 1.8 CELWOID Caenorhabditis elegans 1.8 CELRS3 CEROTABOLITIS elegans 1.8 CELRS3 CEROTABOLITIS elegans 1.8 CELC34G6 CAENORDAS CAENORDAS CERC34G6 CAENORDAS CERC34G6 CAENORDAS CERC34G6 CAENORDAS CERC34G6 CAENORDAS CERC34G6 CAENORDAS CERC34G6 CAENORDAS CERC34G6 CAENORDAS CERC34G6 CAENORDAS CERC34G6 CAENORDAS CERC34G6 CAENORDAS CERC34G6 CAENORDAS CERC34G6 CAENORDAS CERC34G6 CAENORDAS CERC34G6 CAENORDAS CERC34G6 CAENORDAS CERC34G7 CERC34G6 CAENORDAS CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CERC34G7 CE	CELF58B6 Caenorhabditis elegans 1. CELF46EIO Caenorhabditis elegans 1. CELW0269 Caenorhabditis elegans 1. CELW0269 Caenorhabditis elegans 1. CELF43D11 Caenorhabditis elegans 4. CEW02A2 Caenorhabditis elegans 4. CET19B10 Caenorhabditis elegans 7. CELF56H9 Caenorhabditis elegans 7. CELF56H9 Caenorhabditis elegans 7. CELF56H9 Caenorhabditis elegans 7.	CEFF284 Caenorhabditis elegans 4.5 CEZC482 Caenorhabditis elegans 4.7 CEZC482 Caenorhabditis elegans 1.7 CEMOIFI Caenorhabditis elegans 7.8 CELD1037 Caenorhabditis elegans 1.7 CEFF23E1 Caenorhabditis elegans 1.7 CEFF23C Caenorhabditis elegans 1.7 CEFF23C Caenorhabditis elegans 1.7 CEFF23C Caenorhabditis elegans 1.9 CELT187 Caenorhabditis elegans 1.9 CELT187 Caenorhabditis elegans 1.7 CELT187 Caenorhabditis elegans 1.7 CELT187 Caenorhabditis elegans 7.8 CELT1887 Caenorhabditis elegans 7.8 CELT1887 Caenorhabditis elegans 7.8 CELT1887 Caenorhabditis elegans 7.8 CELT1888 Caenorhabditis elegans 1.7 CELT1888 Caenorhabditis elegans 1.7 CERTIFIC Caenorhabditis elegans 1.7 CERTIFIC Caenorhabditis elegans 1.7 CERTIFIC Caenorhabditis elegans 1.7 CERTIFIC Caenorhabditis elegans 1.7 CERTIFIC Caenorhabditis elegans 1.7 CERTIFIC Caenorhabditis elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7 CERTIFIC CAENORHABDITIS elegans 1.7	CELC1801 CEACTSH12 Caenorhabditis elegans 4 CELC1801 CERC12D8 CERC12D8 CERC12D10 CERC12D10 CERC12D10 CERC13D4 CERC13D4 CERC13D4 CERC11H12 CERC11H12 CERC11H12 CERC11H12 CERC11H12 CERC11H12 CERC11H13 CERC11H13 CERC11H14 CERC11H15 CERC11H15 CERC11H16 CERC11H17 CERC11H17 CERC11H17 CERC11H17 CERC11H17 CERC11H17 CERC11H17 CERC11H17 CERC11H17 CERC11H18 CERC11H18 CERC11H18 CERC11H18 CERC11H18 CERC11H18 CERC11H18 CERC11H18 CERC11H18 CERC11H18 CERC11H18 CERC11H18 CERC11H18 CERC11H18 CERC11H18 CERC11H18 CERC11H18 CERC11H18 CERC11H18 CERC11H18 CERC11H18 CERC11H18 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H18 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H18 CERC1H18 CERC1H18 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H19 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERC1H18 CERCH18 CERCH
CELZC404 Caenorhabditis elegans 4.7 CET24H10 Caenorhabditis elegans 1.7 CET24H10 Caenorhabditis elegans 1.7 CECT44B9 Caenorhabditis elegans 1.7 CEC44B9 Caenorhabditis elegans 1.7 CEC34C12 Caenorhabditis elegans 3.1 CEC34CF1 Caenorhabditis elegans 7. CECMOIB12 Caenorhabditis elegans 7. CECMOIB12 Caenorhabditis elegans 7. CELMOIB12 Caenorhabditis elegans 7. CELMOIB12 Caenorhabditis elegans 1. CELMOIB12 Caenorhabditis elegans 1. CELMOIB12 Caenorhabditis elegans 1. CELC34G6 Caenorhabditis elegans 4. CERS3 Caenorhabditis elegans 4.	CELFSB16 Caenorhabditis elegans 1. CELFSB16 Caenorhabditis elegans 1. CELFAGB10 Caenorhabditis elegans 1. CELFAGB10 Caenorhabditis elegans 1. CELFAGB11 Caenorhabditis elegans 4. CEW02A2 Caenorhabditis elegans 7. CEW02A2 Caenorhabditis elegans 7. CET19B10 Caenorhabditis elegans 7. CELF3GB9 Caenorhabditis elegans 7. CELF3GB9 Caenorhabditis elegans 7. CELF3GB9 Caenorhabditis elegans 7. CELF3GB9 Caenorhabditis elegans 7. CELF3GB9 Caenorhabditis elegans 7.	1 CELF25B4 Caenorhabditis elegans 4.5 1 CECF8B1 Caenorhabditis elegans 1.7 2 CECC482 Caenorhabditis elegans 1.7 2 CEMOIFI Caenorhabditis elegans 1.7 2 CELD1037 Caenorhabditis elegans 1.2 2 CELD1037 Caenorhabditis elegans 1.7 2 CELD1037 Caenorhabditis elegans 1.7 2 CELF3B4 Caenorhabditis elegans 1.7 2 CELF3B4 Caenorhabditis elegans 1.9 3 CELF19F1 Caenorhabditis elegans 1.9 3 CELF19F1 Caenorhabditis elegans 1.7 3 CELF19F1 Caenorhabditis elegans 1.8 3 CELF19F1 Caenorhabditis elegans 3.1 3 CELF19F1 Caenorhabditis elegans 3.1 3 CELF10B1 Caenorhabditis elegans 3.1 3 CELF10B1 Caenorhabditis elegans 1.9 3 CELF1E6 Caenorhabditis elegans 1.1 3 CELF1E6 Caenorhabditis elegans 1.1 3 CELF1E6 Caenorhabditis elegans 1.1 3 CELFIE Caenorhabditis elegans 1.1 3 CEFIE Caenorhabditis elegans 1.1 3 CEFIE Caenorhabditis elegans 1.1 3 CEFIE CAENORHAB CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1 3 CEFIE CAENORHABDITIS elegans 1.1	CELC18412 Caenorhabditis elegans 4. CEC1861 Caenorhabditis elegans 7. CELC1861 Caenorhabditis elegans 1. CELC2513 Caenorhabditis elegans 1. CELC2513 Caenorhabditis elegans 1. CELC2513 Caenorhabditis elegans 7. CELC31D4 Caenorhabditis elegans 7. CELC31D4 Caenorhabditis elegans 7. CELC31D4 Caenorhabditis elegans 7. CELC31D4 Caenorhabditis elegans 7. CELC31D4 Caenorhabditis elegans 7. CELC31D4 Caenorhabditis elegans 7. CELC31D4 Caenorhabditis elegans 7. CELC31D4 Caenorhabditis elegans 7. CELC31D4 Caenorhabditis elegans 7. CELC31D4 Caenorhabditis elegans 7. CELC31D4 Caenorhabditis elegans 7. CELC31D4 Caenorhabditis elegans 1. CEC353 Caenorhabditis elegans 1. CEC363 Caenorhabditis elegans 1. CEC363 Caenorhabditis elegans 1. CEC3651 Caenorhabditis elegans 1. CEC3651 Caenorhabditis elegans 1. CEC3651 Caenorhabditis elegans 1. CEC3651 Caenorhabditis elegans 3. CELR319 Caenorhabditis elegans 3. CELR319 Caenorhabditis elegans 3. CELR319 Caenorhabditis elegans 3. CELR319 Caenorhabditis elegans 3. CELR319 Caenorhabditis elegans 3. CELR319 Caenorhabditis elegans 3. CELR319 Caenorhabditis elegans 3. CELR319 Caenorhabditis elegans 3. CELR319 Caenorhabditis elegans 3. CELR319 Caenorhabditis elegans 3. CELR319 Caenorhabditis elegans 3. CELR319 Caenorhabditis elegans 3. CELR319 Caenorhabditis elegans 3. CELR319 Caenorhabditis elegans 3. CELR319 Caenorhabditis elegans 3. CELR319 Caenorhabditis elegans 3. CELR319 Caenorhabditis elegans 3.
34511 21 CELZC404 Caenorhabditis elegans 4.73468 21 CET24410 Caenorhabditis elegans 1.73468 21 CET24H10 Caenorhabditis elegans 1.73468 21 CEC44B9 Caenorhabditis elegans 1.73470 21 CEC44B9 Caenorhabditis elegans 1.3475 22 CELWORF4 Caenorhabditis elegans 1.3475 22 CELWORF4 Caenorhabditis elegans 7.3475 21 CEC46F11 Caenorhabditis elegans 7.34907 21 CELA61101 Caenorhabditis elegans 7.3492 22 CELMOIA1 Caenorhabditis elegans 1.35240 21 CELZ21012 Caenorhabditis elegans 1.35240 21 CELZ21012 Caenorhabditis elegans 4.35240 21 CELZ21012 Caenorhabditis elegans 4.353417 21 CELZ2466 Caenorhabditis elegans 7.35417 21 CELZ2466 CAENORHAB CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CELZA CE	35579 22 CELF58B6 Caenorhabditis elegans 1.3568 22 CELF46E10 Caenorhabditis elegans 1.3576 21 CELW0269 Caenorhabditis elegans 1.35776 21 CELW0269 Caenorhabditis elegans 1.3578 21 CELF49D11 Caenorhabditis elegans 4.35879 21 CEW02A2 Caenorhabditis elegans 4.35879 21 CENF36H9 Caenorhabditis elegans 7.3588 21 CELF36H9 CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENORMO CAENO	36298   21 CELE75B4   Caenorhabditis elegans 4.5     36329   21 CEC748D1   Caenorhabditis elegans 4.7     36355   21 CEMOIF1   Caenorhabditis elegans 1.7     36355   CEMOIF1   Caenorhabditis elegans 1.2     36404   22 CELD1037   Caenorhabditis elegans 1.2     36404   22 CELD1037   Caenorhabditis elegans 1.2     36405   CEF23B4   Caenorhabditis elegans 1.2     36532   CELF33D4   Caenorhabditis elegans 1.9     36532   CELF46F1   Caenorhabditis elegans 1.9     36532   CELF19F0   Caenorhabditis elegans 1.9     3673   CELF19F0   Caenorhabditis elegans 1.9     3675   CELF19F1   Caenorhabditis elegans 1.9     3675   CELF19B7   Caenorhabditis elegans 1.4     3675   CELF108   Caenorhabditis elegans 1.4     3675   CELF108   Caenorhabditis elegans 1.4     36811   CELT2081   Caenorhabditis elegans 1.4     36812   CEF116   Caenorhabditis elegans 1.4     36928   CEF116   Caenorhabditis elegans 1.4     36939   CEF116   Caenorhabditis elegans 1.4     36930   CEF116   Caenorhabditis elegans 1.4     37037   CEF17C11   Caenorhabditis elegans 1.3     37037   CEF17C11   CAENORHAB   CAENORHAB     37037   CEF17C11   CAENORHAB   CAENORHAB     37037   CEF17C11   CAENORHAB   CAENORHAB     37037   CEF1	4 37329 22 CELC18G1 Caenorhabditis elegans 4 37342 21 CELC18G1 Caenorhabditis elegans 4 37342 21 CELC18G1 Caenorhabditis elegans 1 37527 21 CELC2613 Caenorhabditis elegans 1 37528 21 CELC2513 Caenorhabditis elegans 1 37535 21 CELK11H12 Caenorhabditis elegans 4 37635 21 CELK11H12 Caenorhabditis elegans 7 CELC18H11 Caenorhabditis elegans 7 CELC24H11 Caenorhabditis elegans 7 CELC24H11 Caenorhabditis elegans 7 CELC24H11 Caenorhabditis elegans 7 CELC24H11 Caenorhabditis elegans 1 38013 21 CELC8091 Caenorhabditis elegans 1 38103 21 CELC8091 Caenorhabditis elegans 1 38504 21 CELC8091 Caenorhabditis elegans 1 38504 21 CELC8098 Caenorhabditis elegans 1 38504 21 CELC808 Caenorhabditis elegans 1 38610 21 CELC808 Caenorhabditis elegans 1 38610 21 CELC808 Caenorhabditis elegans 1 38610 21 CELC808 Caenorhabditis elegans 1 38610 21 CELC808 Caenorhabditis elegans 1 38610 21 CELC808 Caenorhabditis elegans 1 38610 21 CELC808 Caenorhabditis elegans 1 38610 21 CELC808 Caenorhabditis elegans 1 38610 21 CELC808 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21
0.4 34511 21 CELZC404 Caenorhabditis elegans 4.7 0.4 34568 21 CETZ4404 Caenorhabditis elegans 4.7 0.4 34668 21 CETZ4H10 Caenorhabditis elegans 1.7 0.4 34668 21 CEC4489 Caenorhabditis elegans 1.7 0.4 34700 21 CEC4489 Caenorhabditis elegans 1.7 0.4 3475 21 CEC4689 Caenorhabditis elegans 1.0 0.4 3475 2 CELW08F4 Caenorhabditis elegans 7.0 0.4 3481 21 CEC46F11 Caenorhabditis elegans 7.0 0.4 34907 21 CELW08F4 Caenorhabditis elegans 7.0 0.4 34907 21 CELM01B12 Caenorhabditis elegans 1.0 0.4 35092 22 CELTJD12 Caenorhabditis elegans 1.0 0.4 35412 11 CELC2466 Caenorhabditis elegans 4.0 0.4 35417 21 CELC2466 Caenorhabditis elegans 7.0 0.4 35417 21 CELC2466 Caenorhabditis elegan	0.4 35579 22 CELFSBB6 Caenorhabditis elegans 1.0.4 35686 22 CELF\$BB6 Caenorhabditis elegans 1.0.4 35782 21 CELF\$BB6 Caenorhabditis elegans 1.0.4 35776 21 CELW0269 Caenorhabditis elegans 1.0.4 35782 21 CELF\$BD1 Caenorhabditis elegans 4.0.4 35879 21 CEN\$0.91 Caenorhabditis elegans 4.0.4 35879 21 CEN\$0.84 Caenorhabditis elegans 7.0.4 35888 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 Caenorhabditis elegans 7.0.4 35985 21 CELF\$BB10 CAENORHABDITIS elegans 8.0.4 35985 21 CELF\$BB10 CAENORHABDITIS elegans 9.0.4 35985 21 CELF\$BB10 CAENORHABDITIS	0.4 36298 21 CELP25B4 Caenorhabditis elegans 4.5 0.4 36592 21 CEFF2BD1 Caenorhabditis elegans 4.7 0.4 36592 21 CEFF2BD1 Caenorhabditis elegans 1.0 0.4 36455 21 CEMOLF1 Caenorhabditis elegans 7.8 0.4 36400 21 CELF33E11 Caenorhabditis elegans 1.2 0.4 36400 21 CEFF23E1 Caenorhabditis elegans 1.2 0.4 36490 21 CEFF23D4 Caenorhabditis elegans 1.3 0.4 36532 21 CELF46F11 Caenorhabditis elegans 1.9 0.4 36532 21 CELF46F11 Caenorhabditis elegans 1.9 0.4 3673 21 CELF19F10 Caenorhabditis elegans 1.9 0.4 36753 21 CELF19F10 Caenorhabditis elegans 7.8 0.4 36753 21 CELF108D2 Caenorhabditis elegans 7.8 0.4 36753 21 CELF108D2 Caenorhabditis elegans 7.8 0.4 36780 19 CERT708D2 Caenorhabditis elegans 7.8 0.4 36811 21 CELT20B12 Caenorhabditis elegans 1.0 0.4 36958 21 CELF166 Caenorhabditis elegans 1.0 0.4 36958 21 CEFF166 Caenorhabditis elegans 1.0 0.4 36958 21 CEFF166 Caenorhabditis elegans 1.0 0.4 36959 21 CEFF17C11 Caenorhabditis elegans 1.0 0.4 37037 21 CEFF17C11 Caenorhabditis elegans 1.0 0.4 37037 21 CEFF17C11 Caenorhabditis elegans 1.0 0.4 37037 21 CEFF17C11 Caenorhabditis elegans 1.0 0.4 37037 21 CEFF17C11 Caenorhabditis elegans 1.0 0.4 37037 21 CEFF17C11 Caenorhabditis elegans 1.0 0.4 37037 21 CEFF17C11 Caenorhabditis elegans 1.0 0.4 37037 21 CEFF17C11	4 37329 22 CELC18G1 Caenorhabditis elegans 4 37342 21 CELC18G1 Caenorhabditis elegans 4 37342 21 CELC18G1 Caenorhabditis elegans 1 37527 21 CELC2613 Caenorhabditis elegans 1 37528 21 CELC2513 Caenorhabditis elegans 1 37535 21 CELK11H12 Caenorhabditis elegans 4 37635 21 CELK11H12 Caenorhabditis elegans 7 CELC18H11 Caenorhabditis elegans 7 CELC24H11 Caenorhabditis elegans 7 CELC24H11 Caenorhabditis elegans 7 CELC24H11 Caenorhabditis elegans 7 CELC24H11 Caenorhabditis elegans 1 38013 21 CELC8091 Caenorhabditis elegans 1 38103 21 CELC8091 Caenorhabditis elegans 1 38504 21 CELC8091 Caenorhabditis elegans 1 38504 21 CELC8098 Caenorhabditis elegans 1 38504 21 CELC808 Caenorhabditis elegans 1 38610 21 CELC808 Caenorhabditis elegans 1 38610 21 CELC808 Caenorhabditis elegans 1 38610 21 CELC808 Caenorhabditis elegans 1 38610 21 CELC808 Caenorhabditis elegans 1 38610 21 CELC808 Caenorhabditis elegans 1 38610 21 CELC808 Caenorhabditis elegans 1 38610 21 CELC808 Caenorhabditis elegans 1 38610 21 CELC808 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 Caenorhabditis elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21 CELR809 CAENORHABDITIS elegans 1 38610 21

Page

4101010	o	~	~ ~	ı			~						_																												
1.94e-04 4.70e-05 4.70e-05 4.70e-05																																									3.35e+01
Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans	legans legans	legans	legans	legans	legans	legans	legans	legans	legans	legans	legans	legans	39.) DN	s. Ors	09) DN	nicros	AB Dan For cy	legans	egans	egans	egans	egans	egans	egans	egans	egans	egans	egans	egans (	egans	egans	К06н	egans	egans ;	egans (	egans	egans (	egans .	egans 2	egans 7	egans
ditis e	ditis e ditis e ditis e	ditis e ditis e	ditis e ditis e	ditis e ditis e	ditis e	ditis e	ditis e	ditis e	ditis e	litis e	ditis e	ditis e	(D4S30)	rvegicus	(D9S18(	HMS2 II	atish A	litis el	us prep litis el	litis el Iitis el	litis el	itis el	itis el	itis el	itis el itis el	itis el	itis el	itis el itis el	itis el	itis el ítis el	itis el	cosmid	itis el itis el	itis el	itis el	itis el	itis ele	itis ele Itis ele	itis ele	itis ele itis ele	tis el
aenorhabdit aenorhabdit aenorhabdit	enorhab enorhab	enorhab enorhab	enorhab enorhab	enorhab enorhab	enorhab	enorhab	enorhabo	enorhabe	enorhabo enorhabo	enorhabo	enorhabo	enorhabo	sapiens no sapie	tus noi	sapiens	aballus	80 Zebi se CCP3	enorhabo	norhabd	norhabd norhabd	norhabd	norhabd	norhabd	norhabd	norhabd norhabd	norhabd	norhabd	norhabd norhabd	norhabd	norhabd norhabd	norhabd	elegans	norhabd	norhabd	norhabd	norhabd	norhabd	norhabd	norhabd	enorhabd: enorhabd:	rhabd
4 H	S S S S	11 Ca	Ca a	4 4 g g	A A	, Q.	A Ca Ca	Cac	ğ ğ U	Cae	Cae	Cae	35 H.s	Rat	35 H.s	E3	MOU	Cae	X Cae	Cae	Cae	Cae	Cae	Cae	A Cae A Cae	Cae	Cae	Cae	2 Cae	Cae	Cae		Z Cae	Cael	Cae	Cae	Cae	Cae	Caer	Caenc	_
CEY48B6 CEY48B6 AC006901 AC006704	AC00687 CEY75B8	AC00691 AC00691	AC00689 AC00689	AC00671 AC00671	AC00691	AC00684	AC00673 AC00684	CEY54G9	CEY62F5 CEY44A6	AC00680;	ACUU6803 CEY87G2	CEY87G2	HSA0612/ HUM276M	AU028624	HSA298WI HS238XC1	ECHMS2	MCCP3	AC006811	ELUNC6	AC006886	ELCYT12 NF022388	ELCED3A	C006775	EU28153	EY102A5	ELF21A9	ELM03E7	EC27D8	ELF36F1	ELF17A9	ELD1065 EC54G10	ELK06H7	ELFS8FI EW07A8	C006750	C006750 EF36F2	EC13B4	EF2064 EC06H2	ELE03D2	ER74	EC13C4 EW01A8	EF14F7
112215	1212	3 5 6	200	202	139	100	197	139	13	616	2 5	13	29	34	3.4	23	2.4	22	2 7	20	<u> </u>	ದ್ದ	ص ت			<u> </u>	Н.	٦ ٥	Н-	<b>-</b> -		-10	7	0.0	ა ⊢	Н.		-			_ (
7.4 293825 7.4 294136 7.4 297900					~ ~	-	4 4	7	2. 4	4 -	7	4 (	*) (*)	(4) (	יח ויי	നറ	າຕາ	ოო	, m	າຕ	ന ന	ന ന	mm	· ~ ·	n m	~ ~	~ ~	~ ~	. ~ ~												
00000 00000	, , ,							00	0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	000	0	00	0	0	00	0	00	00		00		00		0	00	00	00
745 747 748																																									
0	0	O	O	0		00		יי				0		0	7	י י		o O	0 0		2 22	00	2, 2,	c 78	0 26	2, 2,		2	79		0 V 80 V				0 0 0 0 0	080	80		C 81		81
					•							_						_			_		_				<u>-</u>							-					_		
4.70e-05 1.70e-01 4.70e-05 7.87e-04	1.11e-05 4.59e-02 3.12e-03	1.21e-02 1.21e-02	4.59e-02	1.116-05	7.87e-04	1.70e-01 1.11e-05	1.94e-04	1.94e-04	7.87e-04	4.70e-01	1.94e-04	1.946~04	1.70e-01	1.21e-02 1.11e-05	3.12e-03	3.12e-03 1.70e-01	4.59e-02	1.21e-02	1.70e-01 1.11e-05	1.11e-05	4.70e-05	1.70e-01	4.59e-02 3.12e-03	4.59e-02	1.70e-01	1.21e-02 3.12e-03	3.12e-03	3.12e-03	1.11e-05	7.87e-04	1.21e-02	1.11e-05 1.21e-02	7.87e-04	1.11e-05 1.94e-04	7.87e-04	1.11e-05 1.59e-02	1.94e-04	4.70e-05	1.94e-04 1.11e-05	4.59e-02	⊃ ⊢
egans egans egans egans	egans egans egans	egans	egans	egans	egans	egans	egans	gans	egans	egans	egans	egans	egans	egans	egans	egans :	egans 4	egans 1	egans 1	egans 1	egans 4	egans 1	egans 4 egans 3	egans 4	egans 1	egans 3	egans 3	egans 3	egans 4 egans 1	egans 7	egans 1	egans 1	egans 7	egans 1 egans 1	egans 7	egans 1 egans 4	egans 1	egans 4	egans 1 egans 1	egans 4	egans 1.70 egans 1.11
is elegans is elegans is elegans is elegans	is elegans is elegans is elegans	is elegans	is elegans	is elegans	is elegans	is elegans is elegans	is elegans	s elegans	s elegans	s elegans	s elegans	s elegans	s elegans	s elegans	s elegans	s elegans s elegans	s elegans 4	s elegans 1	is elegans 1 is elegans 1	is elegans 1	is elegans 4	is elegans 1	is elegans 4 is elegans 3	is elegans 4 is elegans 1	is elegans 1	is elegans 3	is elegans 3	is elegans 3	is elegans 4	is elegans 7	is elegans 1	is elegans 1 is elegans 1	is elegans 7	is elegans 1	is elegans 7	is elegans I is elegans 4	is elegans 1	is elegans 4	is elegans i is elegans 1	is elegans 4	s elegans 1.70 s elegans 1.11
is elegans is elegans is elegans is elegans	is elegans is elegans is elegans	is elegans	is elegans	is elegans	is elegans	is elegans is elegans	is elegans	s elegans	s elegans	s elegans	s elegans	s elegans	s elegans	s elegans	s elegans	s elegans s elegans	s elegans 4	s elegans 1	is elegans 1 is elegans 1	is elegans 1	is elegans 4	is elegans 1	is elegans 4 is elegans 3	is elegans 4 is elegans 1	is elegans 1	is elegans 3	is elegans 3	is elegans 3	is elegans 4	is elegans 7	is elegans 1	is elegans 1 is elegans 1	is elegans 7	is elegans 1	is elegans 7	is elegans I is elegans 4	is elegans 1	is elegans 4	is elegans i is elegans 1	is elegans 4	s elegans 1.70 s elegans 1.11
Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans	Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans	Caenorhabditis elegans Caenorhabditis elegans	Caenorhabditis elegans Caenorhabditis elegans	Caenorhabditis elegans	Caenorhabditis elegans	Caenorhabditis elegans Caenorhabditis elegans	Caenorhabditis elegans	Caenorhabditis elegans	Caenorhabditis elegans	Caenorhabditis elegans	Caenorhabditis elegans	Caenorhabditis elegans Caenorhabditis elegans	Caenorhabditis elegans	Caenornabditis elegans Caenorhabditis elegans	Caenorhabditis elegans	Caenorhabditis elegans 3	Caenorhabditis elegans 4	Caenorhabditis elegans 1	Caenorhabdítis elegans 1 Caenorhabdítis elegans 1	Caenorhabditis elegans 1	Caenorhabditis elegans 4	Caenorhabditis elegans 1	Caenorhabditis elegans 4	Caenorhabditis elegans 4 Caenorhabditis elegans 1	Caenorhabditis elegans I	Caenorhabditis elegans 3	Caenornabditis elegans 3 Caenorhabditis elegans 1	Caenorhabditis elegans 3	Caenorhabditis elegans 4	Caenorhabditis elegans 7	Caenorhabditis elegans 1	Caenorhabditis elegans 1 Caenorhabditis elegans 1	Caenorhabditis elegans 7	Caenorhabditis elegans 1	Caenorhabditis elegans 7	Caenorhabditis elegans 1 Caenorhabditis elegans 4	Caenorhabditis elegans 1	Caenorhabditis elegans 4 Caenorhabditis elegans 1	Caenorhabditis elegans 1	Caenorhabditis elegans 4	Caenorhabditis elegans 1.70 Caenorhabditis elegans 1.11
CELD1007 Caenorhabditis elegans CELD1007 Caenorhabditis elegans CEY43F4 Caenorhabditis elegans CEY43F4 Caenorhabditis elegans	CETUZD9 Caenorhabditis elegans CEY45F10D Caenorhabditis elegans CEC07A9 Caenorhabditis elegans	CEY7A5A Caenorhabditis elegans CEH16D04 Caenorhabditis elegans	AC006773 Caenorhabditis elegans CEY47H9C Caenorhabditis elegans	CEAA2 Caenorhabditis elegans CEY47D3B Caenorhabditis elegans	AC006759 Caenorhabditis elegans	CEAN340 Caenorhabditis elegans AC006795 Caenorhabditis elegans	AC006795 Caenorhabditis elegans	CEY113B8 Caenorhabditis elegans	CEY38F10 Caenorhabditis elegans CEY38F10 Caenorhabditis ologans	CEY37D8 Caenorhabditis elegans	CEY45F10 Caenorhabditis elegans	CEY39E4 Caenorhabditis elegans	CEY111B2 Caenorhabditis elegans	CEY38G4 Caenorhabditis elegans CEY38G4 Caenorhabditis elegans	AC006779 Caenorhabditis elegans	AC006876 Caenorhabditis elegans 1	CEY41C4A Caenorhabditis elegans 4 AC006915 Caenorhabditis elegans 4	AC006915 Caenorhabditis elegans 1	ACU05908 Caenorhabditis elegans 1 CEX17G7B Caenorhabditis elegans 1	AC006804 Caenorhabditis elegans 1 AC006872 Caenorhabditis elegans 1	AC006710 Caenorhabditis elegans 4	CEY6D1 Caenorhabditis elegans 1	AC006912 Caenorhabditis elegans 3	ACUVE/35 Caenorhabditis elegans 4 CEY95D11 Caenorhabditis elegans 1	CEY6E2 Caenorhabditis elegans 1	AC006907 Caenority additis elegans 3	Celseble Caenornabditis elegans 3 AC006884 Caenorhabditis elegans 1	ACO06788 Caenorhabditis elegans 3	CEY1767 Caenorhabditis elegans 1	AC006719 Caenorhabditis elegans 7 CEY70C5 Caenorhabditis elegans 1	AC006877 Caenorhabditis elegans 1	CEY7A5 Caenorhabditis elegans 1	CEY75B12 Caenorhabditis elegans 7	CEY80D3 Caenorhabditis elegans 1	AC006745 Caenorhabditis elegans 7	ACO06771 Caenorhabditis elegans 1	CEY36E3 Caenorhabditis elegans 1	ACUVOSSS Caenorhabditis elegans 4 CEY41C4 Caenorhabditis elegans 1	CEY76A2 Caenorhabditis elegans 1	AC006765 Caenorhabditis elegans 4 AC006799 Caenorhabditis elegans 1	AC006796 Caenorhabditis elegans 1.70
21 CELD1007 Caenorhabditis el 21 CELD1007 Caenorhabditis el 19 CEY43F4 Caenorhabditis el 19 CEY43F4 Caenorhabditis el	19 CETUZD9 Caenorhabditis elegans 21 CEY45F10D Caenorhabditis elegans 21 CEC07A9 Caenorhabditis elegans	21 CEY7A5A Caenorhabditis elegans 19 CEH16D04 Caenorhabditis elegans	19 AC006773 Caenorhabditis elegans 21 CEY47H9C Caenorhabditis elegans	19 CEAA2 Caenorhabditis elegans 21 CEY47D3B Caenorhabditis elegans	20 AC006759 Caenorhabditis elegans	19 AC006795 Caenorhabditis elegans	19 AC006795 Caenorhabditis elegans	19 CEY113B8 Caenorhabditis elegans	19 CEY45F10 Caenorhabditis elegans 19 CEY38F10 Caenorhabditis along	19 CEY37D8 Caenorhabditis elegans	19 CEY45F10 Caenorhabditis elegans	19 CEY39E4 Caenorhabditis elegans	19 CEY111B2 Caenorhabditis elegans	19 CEY38G4 Caenornabditis elegans 19 CEY38G4 Caenorhabditis elegans 1	19 AC006779 Caenorhabditis elegans	9 AC006876 Caenorhabditis elegans 1	11 CEY41C4A Caenorhabditis elegans 4 19 AC006915 Caenorhabditis elegans 4	9 AC006915 Caenorhabditis elegans 1	CEY17G7B Caenorhabditis elegans 1	9 AC006804 Caenorhabditis elegans 1 AC006872 Caenorhabditis elegans 1	9 AC006710 Caenorhabditis elegans 4	9 CEYEDI Caenorhabditis elegans 1	AC006912 Caenorhabditis elegans 3	<pre>v ACU00/35 Caenorhabditis elegans 4 9 CEY95D11 Caenorhabditis elegans 1</pre>	9 CEY32F6 Caenorhabditis elegans 1	O AC006007 Caenorhabditis elegans 3	o AC006884 Caenorhabditis elegans 3	9 AC006788 Caenorhabditis elegans 3	CEY1767 Caenorhabditis elegans 1	9 AC006719 Caenorhabditis elegans 7 9 CEY70C5 Caenorhabditis elegans 7	9 AC006877 Caenorhabditis elegans 1	9 CEY7A5 Caenorhabditis elegans 1	9 CEY75B12 Caenorhabditis elegans 7 ACO06880 Caenorhabditis ologon 1	9 CEY80D3 Caenorhabditis elegans 1	9 AC006745 Caenorhabditis elegans 7	AC006771 Caenorhabditis elegans 1	CEY36E3 Caenorhabditis elegans 1	J ACUU0893 Caenorhabditis elegans 4 9 CEY41C4 Caenorhabditis elegans 1	CEY76A2 Caenorhabditis elegans 1	A AC006765 Caenorhabditis elegans 4 AC006799 Caenorhabditis elegans 1	AC006796 Caenorhabditis elegans 1.11
4 47554 21 CELD1007 Caenorhabditis elegans 4 4754 21 CELD1007 Caenorhabditis elegans 4 48270 19 CEY43F4 Caenorhabditis elegans 4 48270 19 CEY43F4 Caenorhabditis elegans	4 65074 21 CECO7A9 Caenorhabditis elegans 4 66004 21 CECO7A9 Caenorhabditis elegans 4 66004 21 CECO7A9 Caenorhabditis elegans	4 68270 21 CEY7A5A Caenorhabditis elegans 4 68316 19 CEH16D04 Caenorhabditis elegans	4 69430 19 ACO06773 Caenorhabditis elegans 4 75342 21 CEX47H9C Caenorhabditis elegans	4 82986 19 CEAA2 Caenorhabditis elegans 4 95968 21 CEX47D3B Caenorhabditis elegans	4 103725 20 AC006759 Caenorhabditis elegans	4 108589 19 AC006795 Caenorhabditis elegans	4 108589 19 AC006795 Caenorhabditis elegans	4 110000 19 CEY113B8 Caenorhabditis elegans	4 110000 19 CEY45F10 Caenorhabditis elegans 4 110000 19 CEY38F10 Caenorhabditis oldans	4 110000 19 CEY37D8 Caenorhabditis elegans	4 110000 19 CEY45F10 Caenorhabditis elegans	4 110000 19 CEY39E4 Caenorhabditis elegans	4 110000 19 CEY111B2 Caenorhabditis elegans	4 117864 19 CEY38G4 Caenorhabditis elegans	4 119562 19 AC006779 Caenorhabditis elegans	4 126356 19 AC006876 Caenorhabditis elegans 1	4 129060 21 CEY41C4A Caenorhabditis elegans 4 134095 19 AC006915 Caenorhabditis elegans	4 134095 19 AC006915 Caenorhabditis elegans 1	4 143092 21 CEY17G7B Caenorhabditis elegans 1	1 145614 19 AC006804 Caenorhabditis elegans 1 145614 20 AC006872 Caenorhabditis elegans 1	1 145920 19 AC006710 Caenorhabditis elegans 4	1 153835 19 CEY6D1 Caenorhabditis elegans 1	157418 19 AC006912 Caenorhabditis elegans 3	171817 19 CEY95D11 Caenorhabditis elegans 4	1 186306 19 CEY6E2 Caenorhabditis elegans 1 187816 19 CEY32F6 Caenorhabditis	1 188972 20 AC006907 Caenorhabditis elegans 3	193188 20 AC006884 Caenorhabditis elegans 3	206217 19 AC006788 Caenorhabditis elegans 3	207139 19 CEY17G7 Caenorhabditis elegans 1	224525 19 ACO06719 Caenorhabditis elegans 7 Caenorhabditis elegans 7	227066 19 AC006877 Caenorhabditis elegans 1	235922 19 CEY7A5 Caenorhabditis elegans 1	244239 19 AC006880 Caenorhabditis elegans 7	244513 19 CEY80D3 Caenorhabditis elegans 1	249287 19 AC006745 Caenorhabditis elegans 7 249640 19 CEV7942	250178 19 AC006771 Caenorhabditis elegans 4	250448 19 CEY36E3 Caenorhabditis elegans 1	200033 20 Acudo893 Caenorhabditis elegans 4 261002 19 CEY41C4 Caenorhabditis elegans 1	269082 19 CEY76A2 Caenorhabditis elegans 1	274498 19 AC006765 Caenorhabditis elegans 4 278007 19 AC006799 Caenorhabditis elegans 1	291622 19 AC006796 Caenorhabditis elegans 1.11
CELD1007 Caenorhabditis elegans CELD1007 Caenorhabditis elegans CEY43F4 Caenorhabditis elegans CEY43F4 Caenorhabditis elegans	0.4 59573 21 CEY45F10D Caenorhabditis elegans 0.4 59573 21 CEY45F10D Caenorhabditis elegans 0.4 66004 21 CEC07A9 Caenorhabditis elegans	0.4 68270 21 CEY7A5A Caenorhabditis elegans 0.4 68316 19 CEH16D04 Caenorhabditis elegans	0.4 69430 19 AC006773 Caenorhabditis elegans 0.4 75342 21 CEY47H9C Caenorhabditis elegans	0.4 82986 19 CEAA2 Caenorhabditis elegans 0.4 95968 21 CEY47D3B Caenorhabditis elegans	0.4 103725 20 AC006759 Caenorhabditis elegans	0.4 108589 19 AC006795 Caenorhabditis elegans	0.4 108589 19 AC006795 Caenorhabditis elegans 0.4 110000 19 CEY37D8 Caenorhabditis	0.4 110000 19 CEY113B8 Caenorhabditis elegans	0.4 110000 19 CEY45F10 Caenorhabditis elegans 0.4 110000 19 CEY38F10 Caenorhabditis closus	0.4 110000 19 CEY37D8 Caenorhabditis elegans	0.4 110000 19 CEY45F10 Caenorhabditis elegans	0.4 110000 19 CEY39E4 Caenorhabditis elegans	0.4 110000 19 CEY1111B2 Caenorhabditis elegans	0.4 117864 19 CEY38G4 Caenorhabditis elegans	0.4 119562 19 AC006779 Caenorhabditis elegans 0.4 119562 19 AC006779 Caenorhabditis elegans	0.4 126356 19 AC006876 Caenorhabditis elegans	0.4 129060 21 CEY41C4A Caenorhabditis elegans 4 0.4 134095 19 AC006915 Caenorhabditis elegans 4	0.4 134095 19 AC006915 Caenorhabditis elegans 1	0.4 143092 21 CEY17G7B Caenorhabditis elegans 1	0.4 145514 19 AC006804 Caenorhabditis elegans 1 0.4 145514 20 AC006872 Caenorhabditis elegans 1	0.4 145920 19 AC006710 Caenorhabditis elegans 4	0.4 153835 19 CEY6D1 Caenorhabditis elegans 1	0.4 157418 19 AC006912 Caenorhabditis elegans 3	0.4 171817 19 CEY95D11 Caenorhabditis elegans 4	0.4 187816 19 CEYSE2 Caenorhabditis elegans 1	0.4 188972 20 AC006907 Caenorhabditis elegans 3	0.4 193188 20 AC006884 Caenorhabditis elegans 3	0.4 204594 19 AC006788 Caenorhabditis elegans 3	0.4 207139 19 CEY17G7 Caenorhabditis elegans 1	0.4 209355 19 ACO06719 Caenorhabditis elegans 7 0.4 224525 19 CEY70C5 Caenorhabditis elegans 1	0.4 227066 19 AC006877 Caenorhabditis elegans 1	0.4 235922 19 CEY7A5 Caenorhabditis elegans 1	0.4 243820 19 CEY75B12 Caenorhabditis elegans 7 0.4 244239 19 ACO06880 Caenorhabditis elegans 7	0.4 244513 19 CEY80D3 Caenorhabditis elegans 1	0.4 249287 19 AC006745 Caenorhabditis elegans 7	0.4 250178 19 AC006771 Caenorhabditis elegans 4	0.4 250448 19 CEY36E3 Caenorhabditis elegans 1	0.4 261002 19 CEY41C4 Caenorhabditis elegans 4	0.4 269082 19 CEY76A2 Caenorhabditis elegans 1	0.4 274498 19 AC006765 Caenorhabditis elegans 4 0.4 278007 19 AC006799 Caenorhabditis elegans 1	0.4 291622 19 AC006796 Caenorhabditis elegans 1.11
0.4 47554 21 CELD1007 Caenorhabditis elegans 0.4 47570 19 CEY43F4 Caenorhabditis elegans 0.4 48270 19 CEY43F4 Caenorhabditis elegans 0.4 48270 19 CEY43F4 Caenorhabditis elegans	28 0.4 48338 19 CETVLZD9 Caenorhabditis elegans 28 0.4 55573 21 CET45F10D Caenorhabditis elegans 30 0.4 66004 21 CEC07A9 Caenorhabditis elegans	29 0.4 68270 21 CEY7ASA Caenorhabditis elegans 29 0.4 68316 19 CEH16D04 Caenorhabditis elegans	28 0.4 69430 19 ACO06773 Caenorhabditis elegans 34 0.4 75342 21 CEX47H9C Caenorhabditis elegans	34 0.4 82986 19 CEAA2 Caenorhabditis elegans 30 0.4 95968 21 CEY47D3B Caenorhabditis elegans	31 0.4 103725 20 AC006759 Caenorhabditis elegans	34 0.4 108589 19 ACO06795 Caenorhabditis elegans	32 0.4 108589 19 AC006795 Caenorhabditis elegans 33 0.4 110000 19 CEV37708 Caenorhabditis elegans	32 0.4 110000 19 CEY113B8 Caenorhabditis elegans	31 0.4 110000 19 CEY45F10 Caenorhabditis elegans . 27 0.4 110000 19 CEY38F10 Caenorhabditis alogans .	33 0.4 110000 19 CEY37D8 Caenorhabditis elegans	32 0.4 110000 19 CEY45F10 Caenorhabditis elegans	32 0.4 110000 19 CEY39E4 Caenorhabditis elegans	27 0.4 110000 19 CEY111B2 Caenorhabditis elegans 29 0.4 117864 19 CEY1864	34 0.4 117864 19 CEY38G4 Caenorhabditis elegans	30 0.4 119562 19 ACO06779 Caenorhabditis elegans 30 0.4 119562 19 ACO06779 Caenorhabditis elegans	27 0.4 126356 19 AC006876 Caenorhabditis elegans	28 0.4 129060 21 CEY41C4A Caenorhabditis elegans 4 33 0.4 134095 19 AC006915 Caenorhabditis elegans /	29 0.4 134095 19 ACO06915 Caenorhabditis elegans 1	34 0.4 143092 21 CEY17G7B Caenorhabditis elegans 1	34 0.4 145614 19 AC006804 Caenorhabditis elegans 1 34 0.4 145614 20 AC006872 Caenorhabditis elegans 1	33 0.4 145920 19 AC006710 Caenorhabditis elegans 4 3 0.4 152184 19 CRV70610 Caenorhabditis elegans 4	27 0.4 153835 19 CEY601 Caenorhabditis elegans 1 28 0.4 156152 19 CEY604	30 0.4 157418 19 AC006912 Caenorhabditis elegans 3	22 0.4 171817 19 CEY95D11 Caenorhabditis elegans 4	2/ 0.4 186306 19 CEY6E2 Caenorhabditis elegans 1 29 0.4 187816 19 CEY32F6 Caenorhabditis ologans 1	30 0.4 188972 20 AC006907 Cannothabilis elegans 3	32 0.4 193188 20 AC006884 Caenorhabditis elegans 3	30 0.4 204594 19 ACO06788 Caenorhabditis elegans 3	34 0.4 207139 19 CEY17G7 Caenorhabditis elegans 1	21 0.4 209355 19 ACO06719 Caenorhabditis elegans 7 27 0.4 224525 19 CEY70C5 Caenorhabditis elegans 1	29 0.4 227066 19 AC006877 Caenorhabditis elegans 1 34 0.4 227066 19 AC006877 Caenorhabditis elegans 1	29 0.4 235922 19 CEY7A5 Caenorhabditis elegans 1	31 0.4 243820 19 CEY75B12 Caenorhabditis elegans 7 34 0.4 244239 19 AC006880 Caenorhabditis ologon	32 0.4 244513 19 CEY80D3 Caenorhabditis elegans 1	31 0.4 249287 19 AC006745 Caenorhabditis elegans 7 34 0.4 249640 19 CEV7042	28 0.4 250178 19 AC006771 Caenorhabditis elegans 4	33 0.4 260699 20 ACONGES Caenorhabditis elegans 1	32 0.4 261002 19 CEY41C4 Caenorhabditis elegans 4	34 0.4 269082 19 CEY76A2 Caenorhabditis elegans 1	28 0.4 274498 19 AC006765 Caenorhabditis elegans 4 27 0.4 278007 19 AC006799 Caenorhabditis elegans 1	34 0.4 291622 19 AC006796 Caenorhabditis elegans 1.11

2.13e+00 2.13e+00 2.13e+00 2.13e+00 2.35e+01 3.56+01 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.13e+00 3.10e+00 3.10	2.35e+01 7.19e+01 2.35e+01 2.35e+01 2.35e+01 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00	7.19e+00 6.09e-01 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00	7.19e+00 6.09e-01 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00 7.19e+00
		(a) (a) (a) (a) (a) (a) (a) (a) (a) (a)	υ
			Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd Caenorhabd
	21 CEF32A11 CEF32A11 CEC36A4 22 CEC36A4 23 CEC17G10 21 CEC17G10 22 CELC17G10 23 CEC27A19 24 CEC27A19 25 CECT17G10 26 CEC27A19 27 CEC27A19 28 CEC7A19 28 CEC7A10 29 CECA10 21 CECCA10 21 CECCA11 21 CECCA10 22 CECTA10 23 CECCA10 24 CECCA10 25 CECCA10 26 CECCA10 27 CECCA10 28 CECCA10 28 CECCA10 29 CECCA10 20 CECCA10 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CECCA11 21 CEC	$\neg$	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
33 93 93 93 93 93 93 93 93 93 93 93 93 9	83356 2 90355 2 401154 2 401154 2 40201 2 40301 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 41230 2 4	42528 442861 42861 431915 431915 433526 433526 433526 444373 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44464 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 44664 46664 46664 46664 46664 46664 46664 46664	7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
		$\omega \cdot \omega \cdot$	m $m$ $m$ $m$ $m$ $m$ $m$ $m$ $m$ $m$
00000000000000000000000000000000000000	00000000000000000000000000000000000000	40040040404444444444444444444444444444	4 0 0 4 4 0 4 4 0 0 4 4 4 0 0 0 0 4 4 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0000 0 00000 0 000000 0 000000000000	0 0 0 0000 0000 0000 0000 0000 0000 0000	0 0 0 00000 0 0 0 0 0 0 0 0 0 0 0 0 0
2.35e+01 2.35e+01 2.35e+01 2.35e+01 2.35e+01 2.35e+01 2.35e+00 5.09e+00 5.09e+01 5.13e+00 5.13e+00 5.13e+00 5.13e+00 5.13e+00 6.09e-01	2.138+00 2.138+00 2.138+00 6.098+00 6.098-01 7.198+00 7.198+00 2.138+00 7.198+00 7.198+00 7.198+00 6.098-01 6.098-01 6.098-01		
	Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans Caenorhabolitis elegans	Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans	aenorhabditis el T. elegans cosmid Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el Jaenorhabditis el
CELC46A5 CELC04G6 CELC07A6 CELC37A2 CELC37A3 CELC37A6 CELC37A6 CELC37A6 CELC37A6 CELC37A6 CELC37A6 CELC37A6 CELC37A6 CELC37A6 CELC37A6 CELC37A6 CELC37A6 CELC37A6 CEC47A6 CEC47A6 CEC47A6 CEC43A3 CEC43A3 CEC43A3 CEC43A3 CEC43A3 CEC43A3 CEC43A3 CEC43A3 CEC43A3	CELF45FB CELF45FB CELF6F3 CELF6FG CELF5GC CELFGBB CELFGBB CELFGBB CELF0BB CELF0BB CELF0BB CELF0BB CEF0BB CEF0BB CEF0BB CEF0BB CEF0BB CEF0BB CEF0BB CEF0BB CEF0BB CEF0BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEFF7BB CEFF7BB CEFF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEF7BB CEFF7BB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB CEFFFB C	CEF14D1 CEF14D1 CEF14D1 CEF10ECS CELCOSCS CELCOSCS CEF08E51 CEF40F1 CEF40F1 CEF21C3 CEF31C3 CEF31C3 CEF31C3 CEF31C3 CEF31C3 CEF31C3 CEF31C3 CEF531C3 CEF531C3 CEF531C3 CEF531C3	CEEF53B2   CELF44E2   CELW02F8   CELW01A11   CELW01A11   CEF10G8   CEF10G8   CEF10G8   CEF10B1   CEF10B1   CEF10B1   CELC26F1   CELC26F1
26054 26195 26195 26195 26196 27396 27396 27396 27396 27396 27396 2817 2817 2817 3001 31050 31050	3 3 1261 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	80 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	334418 2 344518 2 34518 2 34518 2 34518 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 35121 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2 3512 2
	22222222222222222222222222222222222222		
8818 8818 8818 8820 8821 8822 8825 8826 8830 8831 8831 8833			

U

```
/coduct="ceil death protein"
/product="ceil death protein"
/protein_id="AAA27982.1"
/db_xref="pi:q456417"
/db_xref="gi:q456417"
/db_yref="gi:q456417"
/db_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTTAGCACAATTAATCTTGTTTCAGAAAAAAGTCCAGTTTTCTAGATTTTTCCGTCTTA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 AGATCTGAAATAAAGGTGATAAATTAAATTAAGTGTATTTCTGAGGAAATTTGACTGT 60
5547. .5760,5815. .5942,6298. .6537,7013. .7075)
/gene="ced-3"
                                   /note="codes for a protein similar to mammalian interleukin-1b-converting enzyme"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 7653; DB 21; Length 7653;
Pred. No. 0.00e+00;
0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2498 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1271
                                                                     /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /number=4
4635. .5546
/gene="ced-3"
                                                                                                                                                                                                                                                                                                2367. .2429
/gene="ced-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3298. .6537
/gene="ced-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7013. .7652
/gene="ced-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3108. .4302
/gene="ced-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1303. .4634
/gene="ced-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5547. .5760
/gene="ced-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6538. .7012
/gene="ced-3"
                                                                                                                                                                                                                                                                                                                                            2430. .2575
/gene="ced-3"
                                                                                                                                                                                                                                                                                                                                                                                             2576. .2853
/gene="ced-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5761. .5814
/gene="ced-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5815. .5942
/gene="ced-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5943. .6297
/gene="ced-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                           2854. .3107
/gene="ced-3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 7653; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /number=8
1455 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /number=3
                                                                                                                                                                                                                                                                                                                                                                               'number=2
                                                                                                                                                                                                                                                                                                                                                                                                                                 'number=2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                number=3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             number=4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'number=5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /number=5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          number=6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'number=6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'number=7
                                                                                                                                                                                                                                                                                                                              /number=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /number=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        intron
                                                                                                                                                                                                                                                                                                   Intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           intron
                                                                                                                                                                                                                                                                                                                                                                                                intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                noxe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          exon
                                                                                                                                                                                                                                                                                                                                                   exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                               2.13e+00

7.19e+00

6.09e-01

6.09e-01

6.09e-01

6.09e-01

6.09e-01

6.09e-01

6.09e-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                               .13e+00
.19e+00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CELCED3A 7653 bp DNA INV 23-FEB-1994
Caenorhabditis elegans cell death protein (ced-3) gene, complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryotae: mitochoidial eukaryotes; Metazoa; Nematoda; Secernentea; Rhabditida; Rhabditida; Rhabditidae; Rhabditidae; Rhabditidae; Caenorhabditis.

I (bases 1 to 763)
Yuan,J., Shaham,S., Ledoux,S., Ellis,H.M. and Horvitz,H.
The C. elegans cell death gene ced-3 encodes a protein similar imammalian interleukin-lb-converting enzyme
Cell 75, 641-652 (1993)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                join(2232. .2366,2430. .2575,2854. .3107,4303. .4634,
5547. .5760,5815. .5942,6298. .6537,7013. .7075)
/gene="ced-3"
join(2232. .2366,2430. .2575,2854. .3107,4303. .4634,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-FEB-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cell death protein; interleukin-1 beta converting enzyme
                                                                                                                                                                                                                                                                             Mus musculus major his musculus major his musculus chromosom Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Plasmodium falciparum Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Caenorhabditis elegans
Caenorhabditis elegans
Caenorhabditis elegans
Caenorhabditis elegans
                    Caenorhabditis elegans
Caenorhabditis elegans
Caenorhabditis elegans
Caenorhabditis elegans
Human BAC clone 8488
                                                                                                                 Caenorhabditis elegans
Homo sapiens clone DJO
Caenorhabditis elegans
Homo sapiens clone DJI
Human DNA sequence ***
Caenorhabditis elegans
Human BAC clone GSII70
                                                                                                                                                                                                                                 Caenorhabditis elegans
Caenorhabditis elegans
Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Caenorhabditis elegans
Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Caenorhabditis elegans
Caenorhabditis elegans
        Plasmodium falciparum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Caenorhabditis elegans"
/strain="N2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Caenorhabditis elegans (strain N2) DNA.
Caenorhabditis elegans
                                                                   CEY17G7B
HSAC002089
HS173A13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:6239"
2167. .2366
/gene="ced-3"
                                                                                                                                                                                                                                                                                                                                                                                               CEY36E3
PFMAL13P2
                                                                                                                                                                                                                                                                                                                                AC006719
CEY52B11
                                                                                                                                                                                                                                                                                                                                                                                                                               CEY38H6
AC006846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CEY39C12
AC006713
AC006704
AC006881
AC006845
CEY54G9
                                                                                                                                                                                                                                                                                 MMMHC29N7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
1. .7653
                                       CEY37C11
AC006908
                                                                                                                                                   CET08E3
AC006324
                                                                                                                                                                                                                                                                                                                                                                CEY53C12
        PFMAL3P3
                         CEY43F11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CEY40B1
CEY40B1
                                                                                                                                                                                                                                                                                                                                                                                 CEY80D3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CEY51H4
                                                                                                                                                                                     HS24A17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       L29052
9456416
L29052.1 GI:456416
                                                                                                                                                                                                                                                                                                                 13
                                                                                                                                                                                                                                                                                                                                                 139
                                                                                                                                                                                                                                                                                                                                                                                                13
                                                                                                                                                                                                                                                                                                                                                                                                                                 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /number=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300197
                                                                                      148416
152515
                                                                                                                                                                                                                                                                                                               207139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                282173
                                                                                                                                                   162625
163125
                                                                                                                                                                                                                                                                                                   201986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               285604
                                                                                                                                                                                                                                                                                                                                                                                   244513
                                                                                                                                                                                                                                                                                                                                                                                                250448
                                                                                                                                                                                                                                                                                                                                                                                                                                                  257728
                                                                                                                                                                                                                                                                   200965
                                                                                                                                                                                                                                                                                                                                                                                                                                 253812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 268531
      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
```

ö

Gaps

ö

0 0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	20	80	40	00
TA 12	24 24	11 30 11 30	AAAA 36        AAAA 36	4 4 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4 2 5 4	GAT 48	5 54	AAA 601 111 AAA 601	3C 66	AT 72	78	3A 84	06 H2	96 1	10	10	AA 11  -  AA 11	CT 12
20100 11111	CAAAACAAA( 	GTCGT	AAG	TATAAT?        TATAAT?	GAAAAACG               GAAAAACG	GTTCATO	21G	TAGCC	rgrgr       rgrgr	TTTAAAC           TTTAAAC	TAGAT        TAGAT	TTTTC         TTTC	GTGATG	GACTCATA              GACTCATA	CATAAAC	TTACGC        TTACGC	rttct 
TTTTC GCGGCA HHHH GCGGCA	CGCCAA             CGCCAA	TCTTTT 	CAATTG	CGATTT	rgr 	GCTCCGT 	CAATTAATC              CAATTAATC	CTTCCT	AAAGCAG          AAAGCAG	CAATGC	GAATCT        GAATCT	TTCATCA'         TTCATCA'	CTCTTCC	1985 	GCCCAT       GCCCAT	AAATTGT 	CAGCAC          CAGCAC
TCTAGA CCTCGA 	5 – 5 5 – 5	CAGTCATO	TACAT	CGAAGTCG	GTTTA         GTTTA	ACC PACC	AGGG	CACCTT        CACCTT	rtagg         TAGG	CAATT	GGGTTG        GGGTTG	ACAT	GTACAC        GTACAC	TCCAGATC           TCCAGATC	TTACGAGG           TTACGAGG	TCTCCA TCTCCA	TCTTCG
AGTTT CTCAT	CCACA	ATCTIGO 	CAATTAT	GAGATICICO 	ACCACTO        ACCACTO	TTACCTC	AAATTTACG	CTCCGGC	8 – 8	STCG	SACG IIII	IGTAC       IGTAC	TTTCG       TTTCG	GAACTG	GCAGTC: 	AAAAACTT	ATGATT        ATGATT
AAGTCC TTCATG	rgacc           rgacc	CGTT	CTAAG       CTAAG	H-H	AAAAAAACC            	TTACCT       TTACCT	AATAA 	SACCT	TTCGAAACCC              TTCGAAACCC	GCTCTTT	AGGCAAATC               AGGCAAATC	TCATIT        TCATIT	TTTTGT 	GAAATGTG	CATCG	8 - 8	STTT
GAAAAAA CACTTTT 	CCCA	CCTTTT 	GTGTTG        GTGTTG	CAGAAAGATTC 	rcgrr1 	AAACCTTI	TCCAAAATE             TCCAAAAATE	ATGTTT        ATGTTT	TGTTCT        TGTTCT	TTTATA        TTTATA	CATGGA            CATGGA	CCCGGT	TCCCGG	TTTAGA        TTTAGA	TTTTCT(        TTTTCT(	AAACCG        AAACCG	TCTCAAT(         TCTCAAT(
TTTCA ATTAT ATTAT	00 – 00 – 00	TGTGCT(  - - -  TGTGCT(	TTGAACC        TTGAACC	8 = 8	TT	TACTTTP	CTCAAATC 	TTCCAC	99098	GAT	GTG 	AAACG               AAACG	CAACTIG	rateg       rateg	CACTITC	SCAAT        CAAT	AATATCT         AATATCT
1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8=8	TGTGT       TGTGT	TTTT        TTTT	TATTGTT(	TTTTGCATTG	AAAACT/          AAAACT/	CGATA	AAGAT        AAGAT	CTCTTT	CTCTTTTC	TTATATT           TTATATT	CAGGGT	5=5	CTCAAT	ACAATCC	GAAATTTC            GAAATTTC	ATAAGA 
CAATT ATTAA	5 - 5	CATTCG	TGTTCT 	SATT      SATT	CTTGGTT 	ACTAATA 	CATAGATTTT              CATAGATTTT	AATCCT/           AATCCT/	CATCAC	GGTATG        GGTATG	CAAATCGCATT	GAGCTTT        GAGCTTT	TTGGTATC	CTCCGT(	76C1	TCCGC 11111 TCCGC	ACAATCC?            ACAATCC?
TTAGCA TGTCGA 	AGAA      AGAA	TTCGAA(        TTCGAA(	TTTCTT 	GCTCGCC	TTAACC        TTAACC	AGTTTA	CTCATA         CTCATA	AAAAAC            AAAAAC	CACTO	TCATTIC           CATTIC	AATCCAA         AATCCAA	ATCAGG         ATCAGG	TCGTCC 	ACCTGT        ACCTGT	TGCTGC        TGCTGC	TTTTT        TTTTT	ATAT      ATAT
61 T 121 T 121 T		241 G	301 T	361 G(    361 G(	421 T	481 T	541 G( 541 G(	601 C	661 AC 	721 CT      721 CT	781 A + 781 A	841 G	901 G	961 C	1021 T	1081 T	1141 T. 1141 T.
o o	oy oy	Db Qy	do y	dg çy	oy y	do yo	oy Oy	Db Qy	Dp Qy	cy Cy	do oy	oy oy	oy oy	Db Qy	da vo	do Vo	oy Oy

TTA 1260       TTA 1260      	GC 1380 	TAC 1440      AC 1440	TTT 1500      TTT 1500	CTA 1560      CTA 1560	GTT 1620     GTT 1620	CCA 1680      CCA 1680	TTC 1740      TTC 1740	ATT 1800     ATT 1800	AAT 1860     AAT 1860	ACT 1920       ACT 1920	AAA 1980       	AGT 2040      AGT 2040	TCG 2100     TCG 2100	CAT 2160      CAT 2160	ACC 2220           ACC 2220	TGT 2280      GT 2280
	TCGACATTATCGTATTAAGGAATCACAAAATTCTGAGAATGCGTACTGC 	acgcaaatatctcgtagcgaaaactacagtaattctttaaatgact 	TIGTGTCGATTTACGGCCTCAATTTTGAAAATAATTTTTTTT	CGTAAATCGTCACAACGCTACAGTAGTCATTTAAAGGATTACTGTAGTTC 	TCTGAATTTTGTG 	aatticacaagattitiggcaticcactitaaaggcgcacaggattaatic 	TTGCATT	CAGTTTTCTAATA                 CAGTTTTCTAATA	TGACAAACGAAACAAAACAACAACAATTTTAAAAATCAGTTTTCAAA! 	rgttttatgtt               rgttttatgtt	acaattttaacaaaaaaaaccccaaattcgccagaaatcaagataaaaa 	GGTCAAAATTTTCCGATTTTACTGACTTTCACCTTTTTTTT	F - F	TTTGAGGACAATGTTTAAAAAAACACTATTTTTCCAATAATTTCACTCAT 	TAAATCGAAAATCAAATCGTACTCTGACTACGGGTCAGTAGA 	aaggagcttgctagagagaacattatgat 
ATTATCG1	AATCGG AATCGG	AACATATTI            AACATATT	TGTAGCGCJ          TGTAGCGCJ	TGATAACCC           TGATAACCC	GCTACGAGA           GCTACGAGA	TCCGTAATA          TCCGTAATA	ATGGGTCTC 	AATTACTAA              AATTACTAA	TTCCAGGCT             TTCCAGGCT	TAAAAATA!           TAAAAATA!	GATTCAAAA            GATTCAAAA	TTCAAGAGG	GCAGTTGT1 	AGCTGAATT 	TTTCAGACT	ATCAGCCGA             ATCAGCCGA
1201	32	1381	4 4	1501	1561	1621	1681	1741	1801	1861	1921	1981	2041	2101	2161	2221
do oy	7 qa 6	oy Oy	Db Qy	Db Qy	Db Qy	Db Qy	Q _Y	Db	Db	oy Oy	Db	Db Qy	Db Qy	Db Qy	Db Qy	Db Qy

234 234 240 240	2460 2460 2520	2520 2580 2580	2640 2640 2700	2700 2760 2760	2820	2880	2940 2940	3000	3060	3120	3180 3180	3240	3300	3360	3420
CTAGTCATCTAAAAGTCGATGAAATTCTCGAAGTTCTCATCGCAAAA 	ATTGATAATATAAAGAATATTTTTGCAGTCATGTGGAACGGTTCGCGAGAAGA 	TCGTGAACCAGTCCTAACGACGGGGAGATGTGGGCGTTTTTTTGTGTTGTTGTTGTTGTTGTTGTTGT	TTTTAAAGTTCGGCGCAAAAGCAAGGGTCTCACGGAAAAAAGGGGGGGG	CAACCCACGGCACGGTTTTTCCTCCAAAATCGGAAATTATGCACTTTCCCAAAT TGAAGTGAAATATATTTATTTACTGAAAGCTCGAGTGATTATTTAT	ATTTTCGTGGCGCAAAAGGCCATTTTGTAGATTTGCCGAAAATACTTGTCACACACA	ACACACATCTCCTTCAATATCCCTTTTTCCAGTGTTGACTCGAATGCTGTGGAATTCGA 	GTGTCCAATGTCACCGGCAAGCCATCGTCGGAGCCGCGCATTGAGCCCCGCCGGCTACAC	TTCACCGACCCGAGTTCACCGTGACAGCGTCTCTTCAGTGTCATCATTCACTGTTATCA	GGATATCTACTCAAGAGCAAGATCTCGTTCTCGATCGCGTGCACTTCATTCA	ACACAATTATTCATCTCCCCCAGTCAACGCATTTCCCAGCCAACCTTGTATGTTGATGGGIIIIIIIIII	AACACTAAATTCTGAGAATGCGCATTACTCAACATATTTGACGGGCAAATATCTCGTAGC	GAAAAATACAGTAACCCTTTAAATGACTATTGTAGTGTCGATTTACGGGCTCGATTTTCG 	AAACGAATATATGCTCGAATTGTGACGAACGAATTTTAATTTGTGTTTTTGTGTTTTTCTT 	TTGATATTTTTGATCAATTAATAATTATTTCCGTAAACAGACACCAGGGGTACAGTACT 	CTTTTAAAGAGTTACAGTAGTTTTCGCTTCAAGATATTTTGAAAAGAATTTTAAACATTT
28 28 34	2401 2401 2461	2461 2521 2521	2581 2581 2641	2641 2701 2701	2761 2761	2821	2881	2941	3001	3061	3121	3181	3241	3301	3361
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	oy da	Oy Oy	do Qy	o o o	oy Oy	Oy Oy	do Qy	Db Qy	ליני פס	do yo	Oy Oy	Oy Oy	oy Oy	Db Qy	d • •

```
3420
                        3480
                                        3480
                                                         3540
                                                                        3540
                                                                                        3600
                                                                                                                                        3660
                                                                                                                                                        3720
                                                                                                                                                                                        3780
                                                                                                                                                                                                        3780
                                                                                                                                                                                                                         3840
                                                                                                                                                                                                                                                                                                                                                       4080
                                                                                                                                                                                                                                                                                                                                                                                        4140
                                                                                                         3600
                                                                                                                         3660
                                                                                                                                                                        3720
                                                                                                                                                                                                                                         3840
                                                                                                                                                                                                                                                        3900
                                                                                                                                                                                                                                                                        3900
                                                                                                                                                                                                                                                                                        3960
                                                                                                                                                                                                                                                                                                       3960
                                                                                                                                                                                                                                                                                                                       4020
                                                                                                                                                                                                                                                                                                                                        4020
                                                                                                                                                                                                                                                                                                                                                                      4080
                                                                                                                                                                                                                                                                                                                                                                                                        4140
                                                                                                                                                                                                                                                                                                                                                                                                                        4200
                                                                                                                                                                                                                                                                                                                                                                                                                                        4200
                                                                                                                                                                                                                                                                                                                                                                                                                                                        4260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4500
GCGAAACACCTGAAAAAAATCAAAAATTCTGCGAAAATTGAAAAATGCATTAAAATACA
                                                                                                                                                                                                                                                                                                                                                                                                                                 TGAAAAAAAAATCATCTAACATGTGCCAAAACGCTTTTTTCAAGTTTCGCAGATTTTTTGA
                                                        TITITITICATICAAGATATGCITATTAACACATATAATTATCATTAATGTGAATTTCTTG
                                                                                                                         TCATG1GGTT1GTTCATATGAATGACGAAAATAGCAA1TTTTTATATATTTTCCCCTAT
                                                                                                                                                        TCATGTTGTGCAGAAAAAAAAAAAAAAGCGCATGCATTTTTCGACATTTTTACATCGA
                                                                                                                                                                                        ACGACAGCTCACTTCACATGCTGAAGACGAGAGCGCGGAGAAATACCACACATCTTTCT
                                                                                                                                                                                                                         GCGTCTCTCGTCTTCAGCATGTGAAATGGGATCTCGGTCGATGTAAAAAATGTCGAATA
                                                                                                                                                                                                                                                         ATGTAAAAATGCATGCGTTTTTTTACACTTTTCTGCACAAATGAATAGGGGGAAAATGT
                                                                                                                                                                                                                                                                 GAGCAACTTAAAAAGTAGAGAATATTAGAGCGAAAACCAAAATTTCTTCAAGATATTACC
                                                                                                                                                                                                                                                                                                                                                               GAGGATATAATTGAATGAAACATTGCGAAATTAAAATGTGCGAAACGTCAAAAAAAGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATTTGGGTATCAAAATCGATCCTAAAACCAACACATTTCAGCATCCGCCAACTCTTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTAAAATACATTTTTTGTATTTTTCAACATCACATGATTAACCCCCATTATTTTTTGTT
                                                                                                                                                                                                                                                                                                                                        GAGCAACTTAAAAAGTAGAGAATATTAGAGCGAAAAACCAAAATTTCTTCAAGATATTACC
                                                                                                                                                                                                                                                                                                                                                        GCGAAACACCTGAAAAAATCAAAAATTCTGCGAAAATTGAAAAATGCATTAAAATACA
                                                                                                                                                                                                                                                                                                                                                                                                                        TTTTTGCATTTTTCTACATCACATGAATGTAGAAAATTAAAAAGGGAAATCAAAATTTCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCACCGGATGCTCTTCTCGGATACAGTTCAAGTCGTAATCGCTCATTCAGCAAAGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TAAGCCGTGTTTTCGACGAGAAAACCATGTACAGAAACTTCTCGAGTCCTCGTGGAATGT
                                       3421
                                                                       3481
                                                                                        3541
                                                                                                                                                                        3661
                                                                                                                                                                                                        3721
                                                                                                                                                                                                                         3781
                                                                                                                                                                                                                                        3781
                                                                                                                                                                                                                                                       3841
                                                                                                                                                                                                                                                                        3841
                                                                                                                                                                                                                                                                                                       3901
                                                                                                                                                                                                                                                                                                                                        3961
                                                                                                                                                                                                                                                                                                                                                                      4021
                                                                                                                                                                                                                                                                                                                                                                                                        4081
                                                                                                                                                                                                                                                                                                                                                                                                                                       4141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4441
        3361
                        3421
                                                        3481
                                                                                                        3541
                                                                                                                                       3601
                                                                                                                                                        3661
                                                                                                                                                                                        3721
                                                                                                                                                                                                                                                                                        3901
                                                                                                                                                                                                                                                                                                                       3961
                                                                                                                                                                                                                                                                                                                                                       4021
                                                                                                                                                                                                                                                                                                                                                                                        4081
                                                                                                                                                                                                                                                                                                                                                                                                                       4141
                                                                                                                                                                                                                                                                                                                                                                                                                                                        4201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4381
                                                                                                                        3601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4381
                     g
                                                     g
                                                                                      QQ
                                                                                                                                                      g
                                                                                                                                                                                     g
                                                                                                                                                                                                                                                     Q
        ò
                                       QΥ
                                                                     οy
                                                                                                       οy
                                                                                                                     g
                                                                                                                                   Qγ
                                                                                                                                                                        δ
                                                                                                                                                                                                     ΩŽ
                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                    οy
                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                      Ω
                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                 δy
                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                       Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                       óγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δŽ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    d
```

CCTCGTGGAATGT 450	gcagatgccaacacggaatggtaccaaggccg 4560 	CAGAIGCAIGGGCIATACGGITATITGCAAGGACA 4620 	ATATTACCCAAACGCGAAATTTGCCATTTTGCG 4680 	ACAATTIGIGITAA                     ACAATTIGIGIGITAA	GCGAAAATGATTTACCTAG	TCTTAGTTTTTCTATAATATTTGATGTAAAAA 486	CTTAGTTTTTCTATAATATTTTGATGTAAAACTTGAAAACTAGAAAACTAGAAAACTAGAAAACTAGAAAACTAGAAAAACTAGAAAAAAAA	TGATAGCACGAAATCAATT 492	CCAAAAATGCACAATTTAAAATTTGTGAAAATTGGCAAAC 4980 	NAACTITAAAAACCACTCCGGAAAAGCAATAA 504	ACTITAAAAACCACTCCGGAAAAGCAATAA 504	araticaaagitaticatccgatigitatititg 5100 	TTAGAAAAGTTTTATAACATTTTTTCTAGATTTT 5160	AGAATGAAAAATCGATTTTAAAAATATCC 522	Ñ	TACTCCTTAAAGGGCACACCCATTTGCATTGG 5280 	AGGTACCGTAGTTTTGTCGCAAAAATTGCACCAT 5340	STACCGIAGITITIGICGCAAAAAIIGCACCAI JJT	40	46	TITITITIGETTTTTTGGTCCCAAAACCAAAA 546	520	SAAACCCGAAAAATTTCCCAGCCTTGTTCCT 552	GGGAATGCTCCTGACAATTCGAGACTTTGCCAAAC 5580	GGAATGCTCCTGACAATTCGAGACIIIGCCAAAC
TAAGCCGTGTTTTCGACGAGAA	GCCTCATCATAAATAATGAACA 	CAAGGACAATCTTACC 	TCTGACGGGAAGGGTACGG	GAAAATGTGGCGCCCG	TTGCAAAAACAAATTTT	TTGCAAAAACAAATTTT TTTTTCCGCCTACATTAT	TTTTTCCGGCTACATT CCGTTTGTAAATTTTCA	ACCGTTTGTAAATTTTCAGAC	TTCTGAATTTTCAAAATTAT                    TTCTGAATTTTCAAAATTAT	GGTGTTTCAATATGAAATG1	GTGTTTCAATATGAAATGT	1 AAATCAAAACAACGTCACAA1 	1 CAAAATTIGAAAAAATCATG	AAAATTIGAAAAA CAAAATTTTTT	TCAAAATTTTTTTAACAAATC	1 ACAGCTTCGAGAGTTTGAAATTR 	1 AC	1 ACCAAAATTTGTCGTGT	1 TGGACAATAAACCTTCCTAAT 	1 ATTCAAAAAAAAGTCGA		61 AAATCAATTTTCTGCAAAAT	CAATTTTCTGC	21 AATGTAAACTGATATTTAA:	STAAACTGATATTT
4441	4501	. v. v.	62	ب ف د	9 4	4741	4801	4861	4921	86	4981	504]	10	510		522	~	N	534	54	54(	54	54	55	55
δλ	qq o	2 8 2	7 A 3	. i.j. i.j.	දු පු	QY Dp	oy op	Qy	g ò	연	Qy	do oy	QQ	Š Š	oy Oy	d y	d	Οy	<u>අ</u>	7 8	δ	qq	δλ	qq	Qy

AATATTTATGCTAA;	ATTTAAGCCAAAATTGTTAACTCATTTAAAAATTAATCAAAGTTGTCCACGGGTATT 690 ATTTAAGCCAAAATTGTTAACTCATTTAAAAATTAATCAAAGTTGTCCACGGGTATT 690 ACGGTTGGCGCGCGCGCAAATTGTTAAAAATTAATTCAAAGTTGTCCACGGGTATT 690 ACGGTTGGCCGCGCGCGCAAATTTGCAAAACTAATTCAAAGTTGTCCACGGGTATT 690 ACGGTTGGCGCGCGCGCAAATTTTCCCCCAAAATTTAAATTAAATTCAATTCTGTGCGGCTT 696 AAACAAGGGATCGGTTAGAAAACGACGCTCCGCTCTTTTTCTGTGCGGCTT 696 AAACAAGGGATCGGTTAGAATTTTCCCCAAAATTTAAATTCAAATTCTGTGCGGCTT 702 AAACAAGGGATCGGTTAAGATTTTTCCCCAAAATTTAAATTCAATTTTCTGTGCGGCTT 702 AAACAAGGGATCGGTTAAGATTTTTCCCCAAAATTTAAATTCAAATTC 702 AAACAAGGGATCGGTTAAGATTTTTCCCCAAAATTTAAATTCAAAATTC 702 AAACAAGGATCGGTTAAGATTTTTCCCCAAAATTTAAATTCAAAATTC 702 AAACAAGGGATCGGTTAAGATTTTTGCCCAAAATTTAAAATTC 702 AAACAAGGGATCGGTTAAAAATTGTTATCTTTCTCCCCCAGTTTTTTCTTTC	CTCCCGTGCCGGATGCCTCCCGGCCTTTTAAAGTTCGGAACATTTGGCAATTATGTAT 7560 [
661 661 721 721 781	18841 1901 1901 1901 1901 1901 1901 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911 1911	501 TC 11 501 TC 561 AA 561 AA 621 CC
6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	9 2 9 2 9 2 9 2 9 2 9 2 9 2 9 2 9 2 9 2	7

23-NOV-1998

υνςυδ CEC48D1 39908 bp DNA INV 23-NO DEFINITION Caenorhabditis elegans cosmid C48D1, complete sequence. ACCESSION 281049

RESULT

```
hit/display?db=wormacecclass=Sequence & object=C48D1

Current sequence finishing criteria for the C. elegans genome sequencing consortium are that all bases are either sequenced unambiguously on both strands, or on a single strand with both a give primer and dye terminator reaction, from distinct subclones. Exceptions are indicated by an explicit note.

Exceptions are indicated by an explicit note. IMPORTANT: This sequence is NOT necessarily the entire insert of overlapping sections once, or longer because we only sequence overlapping sections once, or longer because we arrange for a small first sequence is the entire insert of clone C48D1. The true right sequence (1..100) overlaps with the end of sequence 281093. The end of this sequence (1..100) overlaps with the end of sequence 281093. Sequence 282274.
                                                                                                                                                                                                                                                          Direct Submission

Submitted (21-OCT-1996) Louis, MO 63110, USA. E-mail:
Jesseanger.ac.uk or rwênematode.wustl.edu
2 (bases 1 to 39908)

Wilson,R., Ainscough,R., Anderson,K., Baynes,C., Berks,M.,
Bonfield,J., Butron,J., Connell,M., Copsey,T., Cooper,J.,
Coulson,A., Craxton,M., Dear,S., Durbin,R., Faveilo,A.,
Fulton,L., Gardner,A., Green,P., Hankins,T., Hillier,L., Jier,M.,
Johnston,L., Jones,M., Kershaw,J., Kirsten,J., Laister,N.,
Latreille,P., Lightning,J., Lloyd,C., McMurray,A., Mortimore,B.,
Sandaers,D., Shownkeen,R., Smaldon,N., Smith,A., Sonnhaumer,B.,
Staden,R., Sulston,J., Thierry Wieg,J., Thomas,K., Vaudin,M.,
Waughan,R., Watscron,R., Watson,A., Weinstock,L.,
Walkinson-Sproat,J. and Wohldman,P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Complement(994. .4439)
/gene="C48D1.1"

Complement(join(994. .1020,1345. .1951,2283. .2580,
2629. .2765,2882. .3147,3615. .3739,4089. .4331,4382. .4439))
/gene="C48D1.1"
/note="similar to C.elegans ZYG-11 like protein; cDNA EST EMBL:Z14909 comes from this gene; cDNA EST EMBL:Z14909
                                                                                                                                    Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
1 (bases 1 to 39908)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Coding sequences below are predicted from computer analysis, using predictions from Genefinder (P. Green, U. Washington), and other available information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /translation="MTKPLHDIACORIAEFVQNGSYDNREFELDSKSSNIVYSYLMNR
DKPFNLKTIHKLNVTKVTLHPQTLDENTARQLKQFSIKELKIGNFSKSKSWCIFRRKE
TRHVDIVRILEAVLNEETRKNLQYLHIEKDQKLMKRWTAKIGNMLPSLTHLTMSDVHI
NEDDFYQLFGNFSNLRSLDISGTNILNIAGISRLKQLEVLALRDFSIATYTELKDLFN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              For a graphical representation of this sequence and its analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Caenorhabditis elegans"
/db_xref="taxon:6239"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /protein_id="CAB02846.1"
/db_xref="PID:e134.141"
/db_xref="PID:g13875048"
/db_xref="G1:3875048"
/db_xref="G1:3875048"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nature 368 (6466), 32-38 (1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    http://webace.sanger.ac.uk/cgi-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             comes from this gene"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /chromosome="IV"
                                                                  Caenorhabditis elegans.
Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="C48D1"
   Ž81049.1 GI:1627677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94150718
                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                       JOURNAL
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                  SOURCE
```

```
Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                          Cb
                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                            g
                                                   qq
                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VDAPTISRVPDEKTMYRNFSSPRGMCLIINNEHFEOMPTRNGTKADKONLTNLFRCMG
YTVICKDNLTGRGMLLTIRDFAKHESHGDSALLVILSHGEENVIIGYDDIPISTHEIY
DLLNAANAPELANKPKIYOQACRGERRDNGFPSPUDSVDGYPOFYPERRGWDNRDGPLFN
FLGCVRPQVQVWRKFPSQADILIAYATTAQYVSWRNSARGSWFIQAVCEVFSTHAKD
MDVVELLTEVNKKYAPDIPPAQKYLLLAGSTKLCRLKFTRDSLPN"
COMPLEMENT (16940. . 21616)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FAKKMEBGY ITMLDPPOFWNFLELIFGRTFDNFRKLGRFLKLOTIIEILDFFOHKYG
QRIGGLMYVPALLGETFWTAAILSALGATLSVILGIDMNASVTLSACIAVFYTFTGGY
YAVAYTDVVQLFCIFVGLLILGLYVQNRPNRFKETSLMIDCMLLLVFGGIPWQVYFQR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VESSYAHGAOTLEFVAGVGCILMAIPPALIGAIARNTDWRWTDYSPWNNGTKVESIP
PDKRNWYVPLVFOYTIPRWYAFIGLGAVSAAVWSSADSSVLSASASMFNIWKLITRP
HASEKEVIIVMRIAIIGMAIIMALTIQGIYGLWYLCADLVYVILEPOLLCVVVWP
RSNYYGSLAGAYAVGIVLRLIGGEPLVSLPAFHYPWYTDGVQYFPFRTAMLSSMATI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YIVSIQSEKLFKSGRLSPEWDVMGCVVNIPIDHVPLPSDVSFAVSSETLNMKVECDGM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="PID: a1344743"
/db_xref="PID: a13474743"
/db_xref="PID: a1347500"
/db_xref="PID: a1387500"
/db_xref="CPTREMBL:002229"
/db_xref="CPTREMBL:002229"
/db_xref="RAPDRRELIARNIMMESHLKVDEILEVLIAKOVLNSDNGDMIN
SCGTYRERKREIVKAVORRGDVAFDAFYDALRSTGHEGLAEVLEPLARSVDSNAVEFE
CPMSPASHRRRALSTRYNHADSVSSYSSTIGYQDIYSRARBRSRALBSS
DRHNYSSPPVNAFPSQPISSANSSTIGCSSLGYSSSRARSFERALBS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /translation="MADLLGIVAIVFFYVLILVVGIWAGRKSKSSKELESEAGAATEE"
VMLAGRNIGTLVGIFTWTATWVGGAYINGTAEALYNGGLLGCQAPVGYAISLVMGGLL
LKHLRVLDVSQTRFNLHSRNNIVBQFTBCKMBLPBLRFMDCTRTSLSGDILBCLLKTQ
LSIPNIISVTBATSQYNDVRYLNTAYFHKSVQALVYCLTARKEFDSGYCKKAIRISI
SEDILQOLNIDBCIKTIVKRMOYTBCISTSVQNORLSKLLIIFGMLSNQCCSNGVILLVB
ALMSFVYLYKRMISBAYVKNISYWRNVBKLVNLKLGKLDFDKISKTAMSFLLBNRVS
KALRTFASSVLCQCIHRMHSDBLKSLSEKTENVNRLVDILEWSVGQKNETKLSEFFEI
TIKMTEKSSKACTNMIQAGIISISLSCMEKVESNDITTKCLELLINLSSALNYDSLQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QFPQLQTEHRLQYIRTNSRLMKIHYYIHIRTKVIIPQIAIKRDELVPRVHLISSQIFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complement(join(16940. 17126,18419. 18597,18985. 19442,19553. 19879,19925. 19961,20333. 20481,20789. 20987,21037. 21152,21373. 21616))
                                                                                                                                                                                                                                                                                                                                                                                                                  CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 4164; DB 21; Length 39908;
Pred. No. 0.00e+00;
0; Mismatches 27; Indels 37; Gaps 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene="C48D1.3"
/note="Similarity to Salmonella sodium/proline symporter
/note="Similarity to Salmonella sodium/proline symporter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5916 GGTTAAAATTAAATCGAAATTGATTCCCGGCAAAAATGAATATGGTACGGTAGGTTGGTGG 5975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7506 GGGAGAGATGGGAATGCTATTCGTTAATTTCAAATATTAGATTTTTGTGGCGAAAAAATA 7447
                                                                                                                                                                                                                                                                                                                                    /Joce="similar to Caspase recruitment domain, ICE-like protease (caspase) p20 domain., ICE-like protease (caspase) p10 domain., cDNA EST EMBL:D75533 comes from this gene, CDNA EST yk198f10.5 comes from this gene; cD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDNA EST EMBL: C13840 comes from this
                                                                                                                                                                                                                                complement(join(6258. .6349,6876. .7065,7420. .7547,
7602. .7815,8728. .9059,10248. .10501,10780. .10925,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene; cDNA EST EMBL:C11562 comes from this gene"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7146 g 12635 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="SPTREMBL:002228"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /procein_id="CAB02847.1"
/db_xref="PID:e1344742"
/db_xref="PID:93875049"
/db_xref="GI:3875049"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /protein_id="CAB02848.1"
                                                                                                                                                                                  complement(6258. .11120)
/gene="C48D1.2"
                                                                                                                                                            LYTSSNVDKIGQANAYSTEK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (SW:PUTP_SALTY);
                                                                                                                                                                                                                                                                                11120))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /gene="C48D1.3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /codon_start=1
                                                                                                                                                                                                                                                                                                              /gene="C48D1.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    54.48;
99.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6945 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                           10989.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7194;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                             gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ď
```

```
6432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6730 ITTITACTGGAAACCCGATAAATAGTGACTATTTCAAAATTTAACGCAAAAAAATTAGCA 6671
                                                                                                                                                                                                                                                                                                                                                                                                                                                               6335
                                                                                                                                                                                                          6155
                                                                                                                                                                                                                                                                                                                                                                                                                     7087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7027
                                                                                                                          CIGGGCACAACTAAICAAATICAAAACGAGITATIAAAAITATATGCGTICGAGAC 6095
                                                                                                                                                                                                                                7446 GGTTAAAATTAATCGAAATTGATTCCCGGCAAAAATGAATATGGTACGTAGGTTGGTGG 7387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6634 IITIIACIGGAAACCCGAIAAAIAGIGACIAITICAAAAITIAAACGCAAAAAAITAAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6551 ITTGTTTCAAGTACCTCTGGCATCTGTTTCAAAATATTCGATCCCTGTGATGTCTGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6932 TGTGTCGAGAACACTTCACAGAGGCTTGAATGAACCATGATCCACGAGCACTGTTTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CACGAAACATATTGAGCTGTCGTTGCGTATGCAATCAGAATGTCAGCTTGGCTCGGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6694 TARARITICARARICARITITIAGCIARARACIARARITCIAGGITGACGCGCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6670 TAAAATATTCAAAATCAATCTTTAGCTAAAAACTAAAATTCTAGGTTGACGCGGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCTTGCAAAAGGACGCTCTGCCTATTTTTCTGTGCCTTAAAAAGTTAGCAGATCGATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6814 TT-GTT-CAAGTACCTCTGGCATCTGTTTCAAAATATTCGATCCCTGTGATGTCTGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6872 CCACAAGCGACCITCITATIGACITCAGTCAGCAGCICAACAACAICCAIAICCITIGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6431 IGIGICGAGAACACTICACAGACGGCIIGAAIGAACCAIGAICCACGAGCACIGIIITCIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7026 AGGCGGGATGTCATCTGAAATTTTAAATTTTGGGGAAAAATCTAAA-CCGAT-CCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7146 AATTGGGCGAAAGAGAACTGGGGGAGAAGATACAAGATATATCAATTGGGCAATGAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7086 ACGAGIGAATITIAGACGCAGAGTITCGTGCTICCGGCCAAAGTAGAACTITITGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGGCGGGATGTCATCTGAAATTTAAATTTTGGGGAAAAATCTAAAACCGATACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6396 ITGITITCAAGCCGCACAGAAAAAGAGGCGGAGCGTCGTITIGCAAACITGCCGCGCGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6456 AACCGTGTAATACTCGTGGACAACTTTGAATTTTTTTTAAATGAGTTAACAATTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAATTTCGTTGAAAAACTACAAATTTTCGTTTTCAGTAAAATCCAATGGCTAATAAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAATTTCGTTGAAAAACTACAAATTTTCGTTTTCAGTAAAATCCAATGGCTAATAAACAT
                                       6096 ACAAACGICAIAAITIIAGAIIAICGIAGAAAAIGGAAAIGIGGAAAAIGGGAAGAGA
                                                                                                                                                                                                                                                                                                                                                                              6216 AATTGGGCGAAAGAGAACTGGGGGAGAAGATACAGACAATTATCAATTGGGCAATGAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                            6276 ACGAGTGAATTTTAGACGGCAGAGTTTCGTGCTTCCGGCCAAAAGTAGAACTTTTTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6968 ITGITITICAAGCCGCACAGAAAAAGAGGCGGAGCGICGITITIGCAAACTIGCCGCGCGCCC
                                                                                                                                                                   CIGGGCACAACAACTAATTCAAAATTCAAAACGAGTTATTAAAATTATTATGCGTTCGAGAC
                                                                                                                                                                                                                                                                                           6156 AATGATAGAATGATAAAGTGAAATGAGTATAGGATAACAATATACACATGGTTTTAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6850
                                                                                                                                                                          7326
                                                                                                                                  9809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cp
```

TTTCTCCACACTTGCT TTTTTTTTTTTTTTTTTTTTTTT	SCAAAAATTTATTAATTATCATTTAAAAATGTTTACAGGACGG 7111 	AGGCGATTTTAAATTCCCTCTAAACTGAAAACTGCGACCAAT 7231 	CACTITCAAACCAAICCGAIGAAGIGGGGGGGGAGTCGACGAIG 7291 	TTATCACAAATTTGGTAATTATATGGGAATTTTTTGGTGG-A 7350 	CTATTTTAGATTTTTGAAGGAATATTCTCATTCAAGAAATTA 7410 	GCGGCCGCACACATCCAAGAAATTGAACAATGGCCGGTCTCG 7470 	GGAGGAATGCGGACTCCGTCGACAGAATCCAAGACTGGGAA 7530 	CTGAAAATGAATTTATTTAAAATATTTATATTAAAATTAAAAT 7590 	GACAAGCCIGCACAAAAACGATTITCGGCTTAITCGCCAGACG 7650 	IGAGAAGATCATAICICGIGIGIACIAATGGGIAIAICAIC 7710 	TCTCTTCTCCGTGTGATAGAATCACGAGTATCGCAGAATCTCC 7770 	AAAGTCTCGAATTGTCAGGAGCATTCCCTGGAAATTAAATAT 7830 	AAGGCTGGGAATTTTTT-GGGTTTCTTTT-GGTATTTTGACG 7888 	TTTGGGACCAAAAACCAAAAAAAATCGAAATTCGACT 794 	GCTTTTCGAAGATTTCAATTTTACTTTTGGTGATTAGGAAG 80 	CAATITITGCGACAAAACTACGGTACCTGGTCTCGACACGA 8067 	CAAATGGGGTGTGCGCCTTTAAGGAGTACTGTAATTTCAAC 812 
- 2 - 2 - 3 - 3 - 3 - 3 - 3 - 4 - 4 - 4 - 4 - 4	TTTCTCCACACTTGCTGCAA 	ITTTAATTTTCGAAAAGGCG 	SCAATTCACTCGCCCAC 	TGATTGGTTTGTCATTTTATC 	TTTCTGGAATAAAAAT 	AATTGCAACCTGAACTTGC	ATTGTCCCATCCACGAC	CCATTGTCACGACGTTCT 	CGAACCGCCTCGAC	GGAGCATTTGCCGCGTTGAGAA 	CCAATAATCACATTCTCTT 	IGTGATTCGTGTTTGGCAAAGT 	AGTTTACATTAGGAACAAGGCT 	rgaltitt - ggiltit              Galtittitggiltit	TTTTTTGAATTTTTGGCTT 	TTTATTGTCCAATGGTGCAATT 	AAATTTTIGGTC-AATGCAAAT 
	90 40 40	d d	Cp Cp	Cp Cp	d d d	C D	C D	Cp Cp	C P	C D	C C	C C	d d	Cp Cp	Cp Cp	ය දු	Cp Cp

. 96	36	.86 176	.46 116	356	566 796	526 736	685 676	741 616	0 5	858 496	918 436	978 376	0038 316	.0098	01 19	.0218 3137	10278 3077	10338
	267 TITCAGGIGITITCGCACATATTITGCTGACTITCATICAAGATAIGCTTATTAACAICT 93: 	327 ATAATTATCAATAAAGGTAATATCTTGAAGAAATTTTGGTTTTGGCTCTAATATTCTCTA 931 	387 CTTTTTAAGTTGCTCAACGAAAAAAAAGGGGGTTAATCATGTGAGGTTGAAAAAAAA	447 AAAAIGIAITITAATACATITICCCCCTATICATITIGIGCAGAAAGIGIAAAAAAGCC 95	07 ATGCATTTTTACATTATTCGACATT	56	627 GAAGTGAGCTGTCGATGTAAAAATGTCGAAAAATGCATGC	686 TICTGCACA-CATGAATAGGGGAAAAATATAAAAAAATGC-AITTTTGTCATCAT-CATAT 9 	742 GAACAA-CCACATGATTTTTCGTTGAGCAATTTCAAAAGTAGGGCATACTAGAACGAAA 9   11111   111111111111111111111111	801 ACCAAAATTICTACAAGATATICACATTAAIGATAATTATATGITAATAAGCATAT 9 	859 CTTGAATGAAAAAAACCAAAAAATCTGCGAAACTTGAAAAAAGGGTTTTGGCACATGTTA 9 	919 GATGATTTTTTTCAAAATGTTTAAAATTCTTTTCAAAATATCTTGAAGGGAAAACTACT 9 	979 GTAACTCTTTAAAAGAGTACTGTAGCGCTGGTCTCTGTTTACGGAAATAATTTATTAATT 1	039 GATCAAAAATATCAAAAGAAAAACACAAAAATGACAAATTAAAATTGAAATTGTTGTTGTCACAATTGTTGTTTTCGTTGTTGTTTCGTTGTTCGTTGTTCGTTGTT	099 AGCATATATTCGTTTCGAAAATCGAGCCCGTAAATCGACACTACAATAGTCATTAAAGG 1	159 GTTACTGTATTTTCGCTACGAGATATT 	219 CTCAGAATTTAGTGTTCGCATCAACATACAA 11111111111111111111111111	0279 AGATGAATAATTGTGTCGATCCGATGAAA
Q 7	9, 4	0 4	ö m	יס ירי	6 QD 3	. م		ם ב	ם מ	ם מ	ם מ		۵ م .	. A G	ם מ	. a a	. da 9	Dp 1

```
11358 ATTITGACCCICTIGAATTITITAICTIGAITICIGGCGAAITITGGGGITTITITIGI 11417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTCCTCAAAATTCAGCTCGATTTGAGTAATTTTTATCGATTTTTTCCTAGTTTTCGTCA 11297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           aaaactecaacaactgcactgaactacgaaaaaaaaggggaaagtcagtaaaatcggaaa 11357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10998 ATCTCCATTATCACTATTCAACACTTGTTTTGCGATGAGAACTTCGAGAATTTCATCGAC 11057
                                                                                                                                                                                                                                                                                      10519 TIGAAGGAGAIGIGIGIGIGIGIGIGIGACAAGIATITICGGCAAAICTACAAAAIGGCC 10578
                                                                                                                                                                                                                                                                                                                                                                                                                                                       10639 AATATATTTCACTTCAAATATTTGGGAAAGTGCATAATTTCCGATTTTCGGAGGAAAAA 10698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GIGICCCGIAGAGCGAAGAGCAICATAAAACGCGICGAACGCCACAICICCCCGICGIIG 10877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10878 CACIGCITICACGAICICCCGICTICTCGCGAACCGIICCACAIGACIGCAAAAAAI 10937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTTTATATTATCAATTTTTTTTTAAAATTATTATTCGATTAAAAACTCACATTAATCAT 10997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2117 GICCTCAAAAITCAGCICGAITIGAAAITITTATCGAITTITTTCCTAGITITIGGICA 2058
                                                                                                                                                                                                      10459 CGGTGACATTGGACACTCGAATTCGACAGCATTCGAGTCAACACTGGAAAAAAGGGATAT 10518
                                                                                                                                                                                                                                                                                                                                                                         10579 TITTGCGCCACGAAAATTAGTGTTAAAAATAAATAAATCACTCGAGCTTTCAGTAAATAA 10638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCGTGCCGGTGGGTTGCAAATTACGATCCGCCTCTTTT-CCGTGAGACCCTTGCTTTT 10757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCGCCGAACTTTAAAAACCTACGATCTGGCGAGAGGTTCAAGAACTTCAGCAAGTCCTTC 10817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2297 TITIAGATGACTAGAGAACATGATAATGTICCTCTGTAGCAAGCTCCTTCTATGATCTTGACG 2238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10399 AACTCGGGTCGGTGAACTGTAGCCGGCGGGGCTCAATGCGCGGCTCCGACGATGGCTTGC 10458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10339 TCTTGAGTAGATATCCTGATAAGAAGTGAATGATGACACTGAAGAGACGCTGTCACGGTG 10398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2717 AATATATTTCACTTCAAATATTTGGGAAAGTGCATAATTTCCGATTTTCGGAGAAAAA 2658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2597 GCGCCGAACTTTAAAAACCTACGATCTGGCGAGAGGTTCAAGAACTTCAGCAAGTCCTTC 2538
                                                                                                                                                                                                                                                                                                                                                                                                              2777 TITIGGGCCACGAAAAITAGIGITAAAAATAAATAAAIGACTCGAGCTITCAGIAAATAA 2718
                                                                 2956 AACTCGGGTCGGTGAAGTGTAGCCGGGGGGTCAATGCGCGGCTCCGACGATGGCTTGC 2897
3076 AGATGAATAATTGTGTCGATCGATGAATGAAGTGCACGCGATCGAGAACGAGATCTTGC 3017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2057 AAAACTCCAACAACTGCACTGAACTACGAAAAAAAGGTGAAAGGTCAAAAAATCGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11118 CATCATCTTCGGCTGATGGTTGACCTCTCTACTGACCCGTAGTCAGAGTACGATTTGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2417 TCTTTATATTATCAATTTTTTTAAAATTATTATTCGATTAAAAACTCACATTAATCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2357 ATCTCCATTATCACTATTCAACACTTGTTTGCGATGAGAACTTCGAGAATTCATCACGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11058 ITITAGATGACTAGAGAACATCATAATGTTCCTCTCTAGCAAGCTCCTTCTATCTTGACG
                                                                                                                                                                                                                                                                                                              2837 TIGAAGGAGATGTGTGTGTGTGTGTGTGACAAGTATTTTCGGCAAATCTACAAAATGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2657 CCGIGCCGGTGGGTTGCAAATTACGATCCGCCTCTTTTTTCCGTGAGACCCTTGTTTT
                                                                                                                                                                                                                                2896 CGGIGACATIGGACACICGAATICGACCATICGAGTCCACACTGGAAAA-GGGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Сb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Op
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C_{\mathbf{p}}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    엄
                                                                                                                                                                                                                                                                                                   Dp
                                                                                                                                                                                                                                                                                                                                                                                                                         Cp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cp
                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                 셤
```

						···	<u> </u>			-	-				
477 78 537 18 597 58	657	. 16 8	76 9	36	96	0 56	16 1	73	33 1	93 1	53	13	E.	7	8
11 18 11 18 18 18 18 18 11 11 11 11 11 1	111	111	117	118	118	119	120	1207	121	121	1225	~ ~ ~	1237 981	1243 921	1249 861
	8 CGAAAATTTTAGTAATTGAATTAAAAATGCAAGGAGAATTTAAAAGTCTATCAAGT 	4 8	7 7	7 CGCAAAATATCTCGTAGCTACAACTACAGTAATCCTTTAAATGACTACCGTAGCGCTTGT	7 GACGATTTACGGGTTGTCAAAATTCGAAAAAAAAATTATTTTCAAAAATTGAGCCGGTA 	7 AATCGACACAAGCGCTACAGTAGTCATTTAAAGAATTACTGTAGTTTTCGCTACGAGATA 	7 ITITGCGCGTCAAATATGTTGCGCAGTACGCATTCTCAGAATTTGTGATTCCTTAATAC	7 GATAATGTCGAGCCGATTTAAAAG-A-CTTT-ACCATTTTTTGTAGTTTTCGGTGCTATT 	4 AIGATAATTTTACGATAAATTAATACTCAAAAATCGGAATTTTAGCGGAAATATATAAA 	4 AATAAGAIGTIAGCACACGAAGAGAAAGIGCIGCGAAGAAICAIAAACAIIGAGAAGAI 	4 ATTCTTATGGATTGTATATATTGCGTAACAATTTGGAGAAAGTTTTGGCCGGTTTATTG	CAAATITCGCGGAAAAAAAGTITATGATGGCTCGTAAGCATGCCGATGAGAAAAGAA 		AATTGAGACGGAG-CAGGTGGCATCACGGAAGAGTGTACCGAAAACAAAAC	TTGAGGATACCAAGGACACGGAAAATGATGAATGTGGTACAAAATGAACCGGGCGTT 
1141 193 1147 187 11531	1159	1165	1171	1177	1183	1189	1195	12017	1207	1213	12194	12254	12314	12374 980	12433 920
00 Cp	d Cp	d g	do s	C D	d ç	d P	c op	c p	Cp Cp	දු දු	Cp Cp	d q	දු ය	СР	Cp Dp

```
Submitted (04-MR-1999) Nematode Sequencing Project, Sanger Centre, Hinxton, Cambridge CB10 1RQ, UK and Department of Genetics, Mashington University, St. Louis, MO 63110, USA. E-mail: jes@sanger.ac.uk or rw@nematode.wustl.edu
On Mar 22, 1999 this sequence version replaced gi:4468145.
IMPORTANT: This sequence is unfinished and does not necessarily represent the correct sequence. Work on the sequence is in progress and the release of this data is based on the understanding that the corpeancy change as work continues. The sequence may be contaminated with foreign sequence from E.coli, yeast, vector, phage etc. Order of segments is not known; 800 n's separate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida; Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
1 (bases 1 to 314495)
12493 TACCCTGAAAGCTCCTGATCTCATCTAAGATTCCAACCCCGTCATTTGCCTCCATGCACA 12552
                                                                                                                                                                  12613 AAAAGAGCATACCAAATGAGATACACACTGCTTTCCTAAGTGGGTTTCGAAGAACACCGC 12672
                                                                                                                                                                                                                                                  12673 CAAAGAGGIGAIGGAGIGGGGGTAAGGAAGAAGGIGCCGGAGAGGICAAACAIGIGG 12732
                                                                                                                                                                                                                                                                                                                                     12733 AAATCITAGGAIIGITITIGIITCACAITAAIIGCCCICGIAAAITTAITITIGGAITIG 12792
                                                                                                                                                                                                                                                                                                                                                                                                                   12793 AGTATCGAAAATCTATGAGCCATGAACACGGAGCGGTGAGGTAAAGGTAAAGGTTAAAA 12852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12853 GTAGTITIATIAGTAAACTAAICGTITITCACAIAAACAGIGGTITITITAAACGAAACA 12912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12913 ATGCAAAAACCAAGGTTAAATTATAAAATCGACTTCGAGAATCTCAGAATCTTTCTGG 12972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12973 CAACAATAAATGGGGGAGCCTTTTCTTCAATTGATGTAATTAGTTGCTTAGCAACACGTTC 13032
                                                                                                                                    741
                       681
                                                                                                                                                                                                                                                                                                                                                                            620 AAAICTIAGGATIGITITIGITICACATIAATIGCCCICGIAAAITTAITITIGGATIIG 561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             621
                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION Caenorhabditis elegans DNA *** SEQUENCING IN PROGRESS *** from Clone Y67H2, WORKING DRAFT SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12553 : AATATAATGCGATITGGATTGTTTAAAGCATTGAAATTGCGACAAAGAGCTATAAAATCG
                                                                                                                                                                                                                                                                        * NOTE: This is a 'working draft' sequence.
* This record will be updated with the finished sequence
* as soon as it is available and the accession number will
                                                                                                                                                                                                                                                                                                                                                           HTG; HTGS_PHASE1.
Caenorhabditis elegans.
Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AL022475.3 GI:4469034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   be preserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            McMurray, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94469034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Direct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                g
                                                                                                                       S
                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ^{\text{Cp}}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ^{c_p}
```

Location/Qualifiers

FEATURES

```
Db 237394 TGTGATAGAATCACGAGTATCGCAGAATCTCCGTGTGATTCGTGTTTGGCAAAGTCTCGA 237453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Db 237154 GGAACTCCGTCGACAGAATCCAAGACTGGGAATCCATTGTCACGACGTTCTGAAAATGAA 237213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nh 237214 TITATITAAAATATITATATTAAAATTAAAATAAAAACGAACCGCCTCGACAAGCCTGC 237273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Db 237274 ACAAAAACGATTTCGGCTTATTCGCCAGACGGGAGCATTTGCCGCGTTGAGAAGATCA 237333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Db 237334 TATATCTCGTGTGTACTAATCGGTATATCATCAACTCCAATAATCACATTCTCTTCTCCG 237393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Db 236975 IICGIAATIAIATGGCAATITITICGTCGG-ACTITCTGGAATAAAAATCTATITAGAI 237033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        237034 ITTIIGAAGGAATAITCICATICAAGAAATTAAAITGCAACAIGAACTIGCGGCCGCACA 237093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATCCAAGAAAATTGAACAATGGCCCGTCTCGATTGTCCCATCCACGACGAAGAAATGCA 237153
                                                                                                                                                                                                                                                                                                                                                                                                 Db 236555 TCAGCAGCTCAACAACATCCATATCCTCTGCGTGTGTGGAGAACACTGCACAGACGGCTT 236614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        236855 AAAITCCCICTAAACTGAAAACTGCGACCAATCAGCAATTCACTCCGCCCACTTTCAAAC 236914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Db 236915 CAATCCGATGAAGTGGGCGGAGATCGACGATGCTGATTGGTTTGTCATTTTATCACAAAT 236974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     236675 ATGCAATCAGAATGTCAGCTTGGCTTCTTTCTCCCACACTTGCTGCAAAATTTAT 236734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              236795 CGGAATATTTTCGAAAAAATTGAAAAATCAATTTTTAATTTTCGAAAAGGCGATTTT 236854
                                                                                                                                                                                                                                                                                           Db 236495 TCAAAATATTCGATCCCTGTGATGTCTGAAATCCACAAGCGACCTTCTTATTGACTTCAG 236554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    235615 GAATGAACCATGATCCACGAGCACTGTTTCTCCACGAAACATATTGAGCTGTCGTTGCGT 235674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5683 TATATCICGIGIGIACIAATCGGIAIATCAICAACICCAAIAAICACATICICICCG 5624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5743 ACAAAAACGATITICGGCITATICGCCAGACGGGGGGCAITIGCCGCGTTGAGAAGATCA 5684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5923 CATCCAAGAAAATTGAACAATGGCCCGTCTCGATTGTCCCCATCCACGACGAAGAAATGCA 5864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5863 GGAACTCCGTCGACAGAATCCAAGACTGGGAATCCATTGTCACGACGTTCTGAAAATGAA 5804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6043 TICGIDALIATATCGCAATITITCGATCGGGACTTICTGGAATAAAAATCTATTTAGAT 5984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5983 TITITGAAGGAATATTCTCATTCAAGAAATTAAATTGCAACCTGAACTTGCGGCCGCACA 5924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6163 AAATTCCCTCTAAACTGAAAACTGCGACCAATCAGCAATTCACTCGCCCACTTCAAAC 6104
                                                                                                                                                                                                                                                                                                                                              CP 6523 TCAAAATATTCGATCCTGTGATGTCTGAAATCCACAAGCGACCTTCTTATTGACTTCAG 6464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6403 GAATGAACCATGATCCACGAGCACTGTTTCTCCACGAAACATATTGAGCTGTCGTTGCGT 6344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6404
                                                                                                                                                                                                                                              0; Mismatches 33; Indels 31; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5803 ITTAITTAAAATAITTATATTAAAATTAAAATAAAAACGAACCGCCTCGACAAGCCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6283 TAATTAICATITAAAAAIGITTACAGGACGGGCTITCGCICCAAAGAATAAATAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6223 CGGAATATTTTTCGAAAAATTGAAAAATCAATTTTTAATTTTCGAAAAGGCGATTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                    6463 TCAGCAGCTCAACAACATCCATATCCTTTGCGTGTGTCGAGAACACTTCACAGACGGCTT
                                                                                                                                                                                           Length 314495;
                                                                                                                                                                                                                                                                                                                              97027 t 13615 others
          /organism="Caenorhabditis elegans"
/db_xref="taxon:6239"
/chromosome="IV"
                                                                                                                                                                                              Score 3359; DB 19;
Pred. No. 0.00e+00;
                                                                                                                     54551 c 52760 g
                                                                                                                                                                                                   similarity 99.0%;
1. .314495
                                                                                                                                                                                                                                                   Conservative
                                                                                                                           Ø
                                                                                                                                                                                                                                                      6209;
                                                                                                                                                                                                      Query Match
     source
                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            c<sub>p</sub>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      c<sub>D</sub>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
```

```
Db 238470 CCATICCGIGIIGGCAICIGCICAAAGIGIICAIIAITAITAIGAIGAGGCACAIICCACGA 238529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 238350 AAATTTGGGGTTTGGGTAATATAATTTCGCCGTACCCTTCCCGTCAGATTGTCCTTGCAA 238409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Db 238290 CATTTAACACAAATTGTCGTGTCGAGACCGGGGGGCGCCAATTTCGGCGCAAAAATGGCAA 238349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Db 238110 TATCAAGTITTGTATGCGGAAAATTGTCTGAAAATTTACAAACGGTTTTTACATCAAAT 238169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Db 238170 ATTATAGAAAACTAAGAAAAACACATAATGTAGCCGGAAAAAACGAAAATTTCGAAAC 238229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Db 238230 TAGGTAAATCATTTTCGCGGAAGTTCAAAATTTTGTTTTTGCAAAATTATACATTTTTG 238289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        237930 TCGGATGAATAACTTTTGAATTTGTGACGTTGTTTTGATTTTTATTGCTTTTTCCG 237989
                                                                                                                                                                                                                                                                         Db 237571 CAAAAAACCAAAAAAAAAATCGAAATTCGACTTTTTTTTGAATTTTTTGGCTTTTCGAA 237630
                                                                                                                                                                                                                                                                                                                                                                            237631 GATTICAAITITACTITITGGTGATTAGGAAGGTITATIGICCAAIGGTGCAAITITIGC 237690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACAAAAACIACGGIACCIGGICICGACACGACAAAITITIGGIC-AAIGCAAAIGGGGI 237749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Db 237870 ATGITATAAAACTITTCTAAATCCTTCATGATTTTTTCAAATTTTGCAAAAATAAAGAAA 237929
                                                                                                                                                                      Db 237514 AITITIT-GGGIITCITIT-GGIAITITGACGAAAARITGATITITI-GGIITITGGGAC 237570
                                                                     237454 ATTGTCAGGAGCATTCCCTGGAAATTAAATATCAGTTTACATTAGGAACAAGGCTGGGAA 237513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4667 A--TITCGCGITTGGGTAATATATTTCGCCGTACCCTTCCCGTCAGATTGTCCTTGCAA 4610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4966 ACAAATTTTAAATTCTGCATTTTTGGATAATTTTGAAAATTCAGAAAATTGGTTTCGTGC 4907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4846 ATTATAGAAAACTAAGAAAAAACACATAATGTAGCCGGAAAAAACGAAAATTTCGAAAC 4787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4786 TAGGTAAATCATTTTCGCGGAAGTTCAAAATTTTGTTTTTGCAAAATTATACATTTTTG 4727
                                                                                                                                                                                                                                                                                                                                                                                                      5264 GIGCGCCTTTAAGGAGTACTGTAATTTCAAACTCTCGAAGCTGTGGATATTTTAAAATC 5205
                                                                                                                                                                                                                      5503 ATTITITICGGGTTTCTTTTTGGTATTTTGCAGAAA-TTGATTTTTTGGTTTTTTGGGAC 5445
                                                                                                                                                                                                                                                                                                                           5563 ATTGTCAGGAGCATTCCCTGGAAATTAAATATCAGTTTACATTAGGAACAAGGCTGGGAA 5504
                5623 TGTGATAGAATCACGAGTATCGCAGAATCTCCGTGTGATTCGTGTTTGGCAAAGTCTCGA 5564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5146 AIGITATAAAACITITCTAAATCCTTCATGATTTTTCAAATTTTGCAAAATAAACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Db 237750 GTGCGCCTTTAAGGAGTACTGTAATTTCAAACTCTCGTTGCTGTGGATATTTTAAAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              237990 GAGTGGTTTTTAAAATTTTTAAAAATACATTTCATATTGAAACACCGTTTGCCAATTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5026 GAGTGGTTTTTAAAGTTTTTAAAAATACATTTCATATTGAAACACCGTTTGCCAATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    238050 ACAAAITITAAAITGTGCAITITITGGATAATITIGAAAAITCAGAAAAITGGITTCGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5324 GACAAAAACTACGGTACCTGGTCTCGACACGACAAATTTTTGGTCCAATGCAAATGGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5086 TCGGATGAATAACITITGAATITGAATIGTGACGTTGTTTTGATTTTTATIGCTTTTTCCG
Db 237691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                            g
```

06	8589 30	8649	8709 10	8769				600	690	129	189	249	309	367	423	481	541	601
GA 44	CA 23	1G 23	G 23 G 43	T 23	23 23	23	3 23	T 239   T 401	T 239   T 395	C 239	T 239   383	G 239     377	A 239	A 239	239	239	239	341
TCCACC	GGTG      GGTG	TIGCI	GAGTT	CTTTTT	111	AT.	TTTTT 	ATCT 	GAAAAAT           GAAAAAT	TTCCC	GACATT	5-5	GTAAAA         GTAAAA	GAAAA        GAAAA	CGTTG	ATTCA        ATTCA	AAATCT 	
CACATI	ATGGTT        ATGGTT	AAGCT	GAATGAA           GAATGAA(	TICCIC	TAGAAA1         TAGAAA1	TGTAC       TGTAT	SCACATATI 	GGCAAT/        GGTAAT/	CAACGA	F. F.	ATTC	IGAAAC 	TCGATO	TAGGG       TAGGG	TTTTT(             TTTTT(	CTACAAGATATTC 	AAA	AATG
GAGG	GGCTT	GGTCCAGAA(            GGTCCAGAA(	3GT	CAAATT          CAAATT	TCCTCT		GTTTCGC 	FCAATAAAGGCA 	TGCTC, IIIII	TTAATACATI               TTAATACATI	ACAT	SACGCA SACGCA	GTCGT1         GTCGT1	ATGA	ATGATTT	TTCTAC	FGAAAAAATC 	TTTCAA         TTTCAA
PATGAT	SAC SAC	GAGTTGG	CATCC	GATACCC	TTATATC	AATGC 	CAGGTGT	TATCA       TATCA	TAAGT        AAGT	TAT	777777               777777	GAGAC           GAGAC	H H	IGCACA-CAIGAAIAGG 	-CCAC	CAAAATT	TGAAA 	TTTT        TTTT
ATTATT	TCGAAAA(         TCGAAAA	TIV	SAAGAGO	E = E	CATTCAAT	rgtagaaaaatg 	E = E	ATAAT       ATAAT	CTTTT           CTTTT	AAAATO 	ATGCA:            TGCA:	GAAGACGAGAGACGCAGAAAGATI 	SAAGTO	TTTCTGC	TGAACAA-CCACATG           TGAACAAACCACATG	1CCA 111	TTGAATC	ATGAT        ATGAT
GTTCA	rcrc6             rcrc6	GAATATGT!           GAATATGT!	CGAGAGAAG	GATCGAT	£-£	SA	GATTTT	CATCT	CTCTA         CTCTA	TACAA       TACAA	AACGC               AACGC	CACATGCTG	TCAGCATGTGAAGTGAGC 	-ATTT	CATATO	GAAAA 	ATATC	GTTAG
CAAAGT	GGTTT 	CATGGA          CATGGA	STATC        STATC	GTTTTAGG	TTTAATTTCGCAATG 	CATGT(		TTTCATTCAGATATCCGTATTAACATCTATAATTATO 	AATATTCTCTACTITTTAAGTIGCT 	GAAAATACAAAAATG 	GCAGAAAAGTGTAAAAAACGCATGCATTT" 	TTCAC        TTCAC	CTTCAG	FTTTAC-ATTI 	TCAT-(        CATTO	CAAAAGTAGAGCATACTAGAACGAAAAC 	GTTAATAAGCATATCTT 	GCACATGTTAGATGATTT 
стбстс	GTACATO	TCTT	FGAACTGTATC		ATTTC 	CTACATTC	CAATTTTCGCAGAATTT 	VICCGI 	TCT	GTGATGTTG 	AGTGT        AGTGT	CCCATTI              CCCATTI	CTCGTC	GCGCTTT	I-GC-ATTTTCGTCAT-                 TGCTATTTTCGTCATT	CATAC	IGTTAL         GTTAL	TTTTG(         TTTTG
GCAT	GTTTCTG	ATCC IIII	SACT1         SACT1	IGTGTT(	TTTA 		TTCGC	AGATA 	rttggttttcgc 	TGTGA               TGTGA	AGAAA        AGAAA	ACCGACATO	CGCGTCTC	CATGC	C-ATT	ragage         agage	ATATGT(	AAGCGT
GTGTTG	<u> </u>	GTTCATA	GATTACO	FGCTGAAATGTG 	CGCACATTT 	CCTTTTAATTT	CAATT	ATTCA	TTGGT	TAATCATO	5 - 5	8 = 8	CTCCGC        CTCCGC	CGAAAATGCATG 	AAT-G 	AAAAG I I I I I AAAAG	GATAATTA 	AAACTTGAAAAAAGCG 
JC	CTCGAC	AA I	SAGC I I I I SAGC	SATGC	GTTTC	TCCCT	CATTIGITC 		AAGAAATI 	6661    6661	TCATTIC 	TTACATC	턴드턴	GTCGAA         GTCGAA	TAAAAAT            TAAAAAAT	ATTTC 	AATGA        AATGA	AACTT( 
9 CCAT	O GGA	O TCGA(	O AATC	O GCGGATG	O GACC	O ATTTO	0 0	CTGAC	0-0	AATG      AATG	CTAT		TGGTAT7        TGGTAT7	AATG       AATG	TATATI        TATATI	AGCAATTTC 	CATTZ        CATTZ	GCGA
454	m mo	23859(	4365	4309	238770	238830	238890	4069	4009	39070	39130	39190 3829	39250 3769	39310 3709	39368 3649	39424 3589	39482 3529	3954 <i>2</i> 3469
ç	c d	C D	d d	g g	q d	d G	C G	C GD	Db 2	CP CP	Cp Cp	Db 2 Cp	Db 2 Cp	Cp C	Db 2 Cp	C do	CP CP	48 Q. Î

Δ ΰ	340	ATTCTTTTCAAAATATC 	239661 3350
원 강	23966	aaataattaattaatgaeaa 	239721 3290
C.p	328	2 AAAATGACAAATTAAAATTGTGTGTCACAATTCGAGCATATATTGGTTTGGAAATGGAG 	239781 3230
CP CP	b 239782 p 3229	CCCGTAAATCGACACTACAATAGTCATTTAAAGGGTTACTGTAT 	239841
Cp Cp	b 239842 p 3169	TITTGCGCGTCAAATATGTTGAGTAATGCGCATTCTCAGAATTTAGTGTTTGC 	239901
da g	b 239902 p 3110	TACAAGGTTGGCTGGGAAATGCGTTGAC 	239961 3051
d G G	305	AATGAAGTGCACGCAATCGAGAACGAGATCTTGCTCTTGAGT 	240021 2991
d C	24002	TGAATGATGACAC:                   TGAATGATGACAC:	240081 2931
CP	2400	CGGGGCTCAATGCGCGGCTCCGACGATGGCTTGCCGGTGACATTGGACATTCGA 	240141
Cp Cp	2401	CAGCATTCGAGTCAACACTGGAAAAAGGGATATTTGAAGGAGATGTGTGTG	240201 2812
g g	2402	TGACAAGTATTTTCGGCAAATCTACAAAATGGCCTTTTGCGCCACGAAAATTAGTGTTAA 	240261 2752
Cp Cp	2402	AAAATAAATCACTCGAGCTTTCACTAAATAAAATATATTTCACTTCAAATATTTGGG 	240321 2692
පු පු	2403	9 – 9 0 – 9	240381 2632
d d	2403	5-5	40
අ	2404	T - E	240500
d Cp	240501		240560 2452
Cp Cp	2405	<b>\$</b> =\$	240620 2392
Cp Cp	240621	CGATT	40680

```
Db 241757 CTCAAAAATCGGAATTTTAGCGGAAATATTATAAAAATAAGATGTTAGCACACGAAGAGA 241816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Db 241400 TTCAGAGAATGCGTATTACGCATCATATTTGGCGCCCAAAATATCTCGTAGCTAGAACTA 241459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGTACATCCTTTAAATGACTACCGTAGCGCTTGTGACGATTTACGGGTTGTCAAAATTC 241519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241520 GAAAAAAAATTATTTTCAAAATTGAGCCCGTAAATCGACACAAGCGCTACAGTAGTC 241579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241580 ATTTAAAGAATTACTGTAGTTTTCGCTACGAGATATTTTGCGCGTCAAATATGTTGCGCA 241639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Db 241640 GTACGCATTCTCAGAATTTTGTGATTTCCTTAATACGATAATGTCGAGCCGATTTAAAAG- 241698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241221 AAACTGATTTTAAAAATTTTAACAGAAAATTCACGAAAATTTTAGTAATTGAATTAAAA 241280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGCAAGGAGAATTTAAAAGTCTATCAAACTTTTTGCGTGCCGAGACCCATTGGAATAAA 241340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Db 241341 TCC-GTGCGCCTTTAAAGAGGAATGCCAAAATCTTGTGAAATTATTACGGAAACACAAAA 241399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240981 CGAAAAAAAGGGGAAAGTCAGTAAAATCGGAAAATTTTGACCCTCTTGAATTTTTTATC 241040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTATTTTCGCAAACATAAAACACAATTTTCAATGAGAAATCGTTATTTTTAATTTGAAAA 241160
                                                                                                                                                                                                                                                                                          240920
                                                                                                                                                                                                                                                                                                                                                                                      TAATTITIATCGATTTTTTCCTAGTITTCGTCAAAAACTCCAACAACTGCACTGAACTA 240980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1375 GTACGCATTCTCAGAATTTTGTGATTCCTTAATACGATAATGTCGAGCCGATTTAAAAGG 1316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1671 TCCTGTGCGCCTTTAAAGTGGAATGCCAAAATCTTGTGAAATTATTACGGAAACACAAAA 1612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1611 TTCAGAGAATGCGTATTACAG-TCATATTTGGCGCGCAAAATATCTCGTAGCTAGAACTA 1553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1494 GAAAAAAAATTTTTCAAAATTGAGCCCGTAAATCGACACAAGCGCTACAGTAGTC 1435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGAAAAAAAAGGTGAAAGTCAGTAAAATCGGAAAATTTTGACCCTCTTGAATTTTTATC 1972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTATTTTCGCAAACATAAAACACAATTTTTCAATGAGAAATCGTTATTTTAATTTGAAAA 1852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CIGATITITAAAAIGITIGITGITITITIGITITICIGITIGITIGICAGCCIGGAAAAIATAAGA 1792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1791 AAACTGATTTTAAAAATTTTAACAGAAAATTCACGAAAATTTTAGTAATTGAATTAAAA 1732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1731 ATGCAAGGAGAATTTAAAAGTCTATCAAACTTTTTGCGTGCCGAGACCCATTGGAATAAA 1672
                                                                                                                                                                                                               2211 CTCTACTGACCCGTAGTCAGAGTACGATTTGATTTTTCGATTTAGTCTGAAAATGAGTGA 2152
                                                                                                                                                                                                                                                                                                                                                                                                                                       2091 TAATTTTTATCGATTTTTTCCTAGTTTTCGTCAAAAACTCCAACAACTGCACTGAACTA 2032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1434 ATTIAAAGAATTACTGIAGTITTCGCTACGAGATATTTTGC-CGTCAAATATGTTGCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Db 241041 TTGATTTCTGGCGAATTTTGGGGGTTTTTTTTTTTGTAAAATTGTTTTGAATCAGTTCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CIGATITITAAAAIGITIGITOIGITTITIGITTCIGITGICAGCCTGGAAATAITAGA
                         240681 GTTTTGCGATGAGAACTTCGAGAATTTCATCGACTTTTAGATGACTAAAGAACATCATAA
                                                                                            Db 240741 TGTTCCTCTCTAGCAAGCTCCTTCTATCTTGACGCATCATCTTCGGCTGATGGTTGACCT
                                                                                                                           Db 240801 CICTACTGACCCGTAGTCAGAGTACGATTTGATTTTCGATTTAGTCTGAAAATGAGTGAA
                                                                                                                                                                                                                                                                                          ATTATTGGAAAAATAGTGTTTTTTTTTAAACATTGTCCTCAAAATTCAGCTCGATTTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Db 241281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1851
                                                                                                                                                                                                                                                                                                                                               2151
                                                                                                                                                                                                                                                                                                                                                                                              240921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241161
                                                                                                                                                                                                                                                                                               240861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     გ
                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                  გ
                                                                                                                                                                                                                                                                                                                                               Сp
                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                            Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ٤
                                                                                                                                                                                                                                                 Cp
                                                                                                                                                                                                                                                                                               8
```

```
242116 AATGATGAAATGTGGTACAAAATGAACCGGGGGTTTACCCTGAAAGCTCCTGATCTCATC 242175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 242176 TAAGATICCAACCCCGTCATITGCCTCCATGCACAAATATAATGCGATTTGGATTGTTTA 242235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     242236 AAGCATTGAAATTGCGACAAAGAGCTATAAAATCGAAAAGAGCATACCAAATGAGATACA 242295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Db 242356 TAAGGAAGGTGCCGGAGAGGTCAAACATGTGGAAATCTTAGGATTGTTTTTGTTTCA 242415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        242416 CATTAATTGCCCTCGTAAATTTATTTTGGATTTGAGTATCGAAAATCTATGAGCCATGA 242475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           242056 ACGGAAGAGTGTACCGAAAACAAAACGGGACAAGTTGAGGATACCAAGGACGACGAA 242115
                                                                       Db 241817 AAGTGCTGCGAAGAAATCATAAACATTGAGAAGATATTCTTATGGATTGTATATATTGCG 241876
                                                                                                                                                                      1075 TGATGGGCTCGTAAGACTGCCGATGAGAAAAGAAAGGTGGATTGTAGCAGCAGCAGCAATATGA 1016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CEY56A3 224746 bp DNA CAENOTHAG 30-DEC-1998 CAENOTHADGILLS ELEGANS DNA *** SEQUENCING IN PROGRESS *** from clone 156A3, WORKING DRAFT SEQUENCE.
                                                                                                                                                                                                                        1135 TAACAATTIGGAGAAAGTITITIGGCCGGTITAATIGCAAAATITCGCGGAAAAAAATTA 1076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           475 TITICACATAAACAGIGGTITITITAAACGAAACAAIGCAAAAACCAAGGITAAATIA 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 355 TICAATIGAIGIAATAATIGCIIAGCAACACGIICAACAAAAAAAAAGAAAAAAAAGG 296
                       CICAAAAAICGGAAITITAGCGGAAAIAITAIAAAAAIAAAAGAIGTIAGCACACGAAGAGA 1196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              955 ACGGAAGAGTGTACCGAAAACAAAACGGGACAAGTTGAGGATACCAAGGACGACAGGAA 896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         242476 ACACGGAGCGGTGAGGTAAAGGTAAAGGTTAAAAGTAGTTTTATTAGTAAACTAATCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           655 TAAGGAAGAAGGTGCCGGAGAGGTCAAACATGTGGAAATCTTAGGATTGTTTTGTTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  535 ACACGGAGCGGTGAGGTAAAGGTAAAAGGTTTAAAAGTTTTTATTAGTAAACTAATCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                242596 TAAAATCGACTTCGAGAATCTCAGAATCTTTCTGGCAACAATAAATCGGCGAGCCTTTTC
                                                                                                    Db 241937 TGATGGGCTCGTAAGCATGCGATGAGAAAGAAAGTGGATTGTAGCAGCAGCAATATGA
                                                                                                                                                                                                                                                                                                                                                                               Db 241997 GTCACCCATCTGGACAGTTCACATTTCTAAACGATAATTGAGACGGAG-CAGGTGGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 895 AATGATGAAATGTGGTACAAAATGAACCGGGCGTTTACCCTGAAAGCTCCTGATCTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Db 242296 CACTGCTTTCCTAAGTGGGTTTCGAAGAACACCGCCAAAGAGGTGATGGAGTGGTGGGGGC
242716 ACAAAAGATGACTGCAAGATAACGGAAAAGGAG 242748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        295 ACAAAAGATGACTGCAAGATAACGGAAAAGGAG 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Сb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                       Сp
```

AL022280

ACCESSION

```
1381 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CELY44E3B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94150718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                              source
                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                         엄
                                                                                                                                                              Direct Submission

Submitted (30-DEC-1998) Nematode Sequencing Project, Sanger Centre, Hinxton, Cambridge CBIO IRQ, UK and Department of Genetics, Washington University, St. Louis, MO 63110, USA. E-mail: jes@sanger.ac.uk or rw@nematode.wustl.edu
On Dec 31, 1998 this sequence version replaced gi:4006996.
IMPORTANT: This sequence is unfinished and does not necessarily represent the correct sequence. Work on the sequence is in progress and the release of this data is based on the understanding that the contemn can contaminated with foreign sequence from E.coli, yeast, vector, phage etc. Order of segments is not known; 800 n's separate
                                                                                  Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida; Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
1 (bases 1 to 224746)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HTG; HTGS_PHASE1.
Caenorhabditis elegans.
Caenorhabditis elegans.
Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Farbditina; Rhabditidea; Rhabditidae; Peloderinae; Caenorhabditis.
1 (bases 1 to 4917)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (23-FEB-1999) Genome Sequencing Center, Washington University School of Medicine, 4444 Forest Park Parkway, St. Louis, MO 63108, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Db 136606 GCAAAATATCTCGTAGCGAAAACTACAGTAATTCTTTAAATGACTACTGTAGCGCTTGTG 136665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1394 GCAAAATAFCTCGTAGCGAAAACTACAGTAATCTTTAAATGACTGTACTGTGGGCTTGTG 1453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION Caenorhabditis elegans clone Y44E3B, WORKING DRAFT SEQUENCE, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                              * This record will be updated with the finished sequence
* as soon as it is available and the accession number will
* be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          * NOTE: This is a 'working draft' sequence. It currently * Consists of 1 contigs. The true order of the pieces * is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 73; DB 19; Length 224746;
Pred. No. 1.25e-33;
0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6477 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The sequence of Caehorhabditis elegans clone Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                            * NOTE: This is a 'working draft' sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Caenorhabditis elegans'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      40130 c 41166 g 69255 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="taxon:6239"
/chromosome="III"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA
                   HTG; HTGS_PHASE1.
Caenorhabditis elegans.
Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone="Y56A3"
    AL022280.1 GI:4090202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AC006766.1 GI:4263172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 100.0%;
Matches 73; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4917 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 (bases 1 to 4917)
Waterston, R.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .224746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Db 136666 TCGATTTACGGGC 136678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               unordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy 1454 TCGATTTACGGGC 1466
                                                                                                                                              Sulston, J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      67718 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AC006766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'n
                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                           REFERENCE
                                                                                                                                                 AUTHORS
VERSION
KEYWORDS
                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ô
```

```
Department of Genetics, Washington
Park Avenue, St. Louis, Missouri 63108, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           University, 4444 Forest Park Avenue, St. Louis, Missouri 63108, USA Materston,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
Submitted (05-MAR-1999) Department of Genetics, Washington
University, 4444 Forest Park Avenue, St. Louis, Missouri 63108, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
1 (bases 1 to 4917)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Wilson-St. 1 to 4911)
Wilson-St. Ainscough, R., Anderson, K., Baynes, C., Berks, M.,
Bonfield, J., Burton, J., Connell, M., Copsey, T., Cooper, J.,
Coulson, A., Craxton, M., Dear, S., Du, Z., Durbin, R., Favello, A.,
Fulton, L., Gardner, A., Green, P., Hawkins, T., Hillier, L., Jier, M.,
Johnston, L., Jones, M., Kershaw, J., Kirsten, J., Laister, N.,
Latreille, P., Lightning, J., Lloyd, C., McMurray, A., Mortimore, B.,
Saunders, D., Shownkeen, R., Smaldon, N., Smith, A., Sonhhammer, E.,
Staden, R., Sulston, J., Thierry-Mieg, J., Thomas, R., Vaudin, M.,
Waughan, K., Waterston, R., Waterson, A., Weinstock, L.,
Wilkinson-Sproat, J. and Wohldman, P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2.2 Mb of contiguous nucleotide sequence from chromosome III of C.
                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2646 CCGTAAATCGACACAAGCGCTACAGTAGTCATTTAAAGAATTACTGTAGTTTTCGCTACG 2705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Gaps
* arbitrary. Gaps between the contigs are represented as * runs of N, but the exact sizes of the gaps are unknown. * This record will be updated with the finished sequence * as soon as it is available and the accession number will * be preserved.
                                                                                                                                                                                                                                                                                                                                                                                         Length 4917;
                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                           1 4917: contig of 4917 bp in length.
Location/Qualifiers
1. .4917
                                                                                                                                                                                                                      /organism="Caenorhabditis elegans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INV
                                                                                                                                                                                                                                                                                                                                                                                   Score 71; DB 19;
Pred. No. 4.31e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Woessner, J., Graves, T. and Keppler, D.
The sequence of C. elegans cosmid Y44E3B
                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Caenorhabditis elegans cosmid Y44E3B. AF078789
                                                                                                                                                                                                                                                                                                       1556
                                                                                                                                                                                                                                               /db_xref="taxon:6239"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nature 368 (6466), 32-38 (1994)
                                                                                                                                                                                                                                                                                                  1003 g
                                                                                                                                                                                                                                                                     /clone="Y44E3B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Direct Submission
Submitted (16-JUL-1998)
University, 4444 Forest
4 (bases 1 to 4917)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Caenorhabditis elegans.
Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ĀF078789.1 GI:3329615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4917 bp
                                                                                                                                                                                                                                                                                                                                                                           Ouery Match 0.9%;
Best Local Similarity 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 4917)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 to 4917)
                                                                                                                                                                                                                                                                                               977 c
                                                                                                                                                                                                                                                                                                                                                                                                                                   71; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Waterston, R.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2706 AGATATTTTGC 2716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1
```

```
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  unordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20099 TACGAGATATTT 20110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1408 TACGAGATATTT 1397
                                                                                                                                                                                                                                                                                                                                                                                                                                  2706 AGATATTTTGC 2716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1404 AGATATTTTGC 1394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11655 a
                                                                                                                                                ಠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AC006696
                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 join(363. .637,683. .869,922. .1050,1094. .1166,1220. .1416,
1526. .1629,2867. .3080)
/gene="Y44E3B.2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="contains similarity to the common central domain of tyrosinases, polyphenol oxidases and some hemocyanins (Pfam: tyrosinase.hmm, score: 97.33)"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /translation="MDELMHHVFLHTTFNSGSVKNGECYLPSGKLLKRAVRRELRSLR
PDDRIMIENAWNAMKKSGLYNKIGRVHKYSGVHSGPAFTLWHREFLKRLELALRDHMK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NPDFGLPFWDSTLDSLLPEPKDSIIFSELFLGEVDDKGFVKNGPYHNWETMEGRAQIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RNFGEDDSGEMLNDARVDWLINNPDINMILGATMPLSTCPMNHTLDARMLEFSHDYVH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FFVNGDMSKSYSSSNDVCFVYHHGMIDWIFEHWRQNMQSREERKTEYPKSDERCFPFW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HNGONSMPLLOPLKNKDALSNGYTDNMYEYYPRPTCTRENPDCDSPYLFCYIPPNNEH
PPSCVSKVRRNGVCRGFEDYPICYWGQCVDGRCDETVKAPKRLEKFKKFEKKIPPFIM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This is a segment of YAC Y44E3, sequenced to span the gap between Y54E10A and W01E11. The 5' clone is Y54E10A3' clone is W01E11, 200 by overlap. Actual start of YAC Y44E3 is at base position 1 of CELY44E3B; actual end is at 10513 of CELK03E5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Coding sequences below are predicted from computer analysis, using the program Genefinder(P. Green and L. Hillier, {\tt ms} in preparation).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   leucine zip domain (Pfam: bZIP.hmm, score: 15.41); coded for by C. elegans cDNA yk437c3.5; coded for by C. elegans
                                                                                                                                                                                                                                                                                                                                                                                   all regions were double stranded or sequenced with an alternate chemistry; an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by
                                                                                                                                                                                                                          NOTICE: This sequence may not be the entire insert of this clone. It may be shorter because we only sequence overlapping sections once, or longer because we provide a small overlap between neighboring submissions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="contains similarity to the basic region plus the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement(join(3375. .3447,3500. .4257,4699. .4824))
/gene="Y44E3B.1"
                                                                                                                                                                                                                                                                                                                                                           This sequence was finished as follows unless otherwise noted:
                                           Department of Genetics, Washington University, St. Louis, MO 63110, USA, and Sanger Centre, Hinxton Hall Cambridge CB10 IRO, England e-mail: rw@nematode.wustl.edu and jes@sanger.ac.uk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Caenorhabditis elegans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NEIGHBORING COSMID INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequence from more than one subclone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /evidence=not_experimental
/protein_id="AAC64634.1"
/db_xref="PID:93329616"
/db_xref="GI:3329616"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /protein_id="AAC64635.1"
/db_xref="PID:93329617"
/db_xref="GI:3329617"
                        Genome Sequencing Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement(3375. .4824)
/gene="Y44E3B.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /strain="Bristol N2"
/db_xref="taxon:6239"
/clone="Y44E3B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                363. .3080
/gene="Y44E3B.2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              for by C. elegan
cDNA yk437c3.3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /chromosome="I"
363. .3080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .4917
Submitted by:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NOTES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           dene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
COMMENT
```

```
Submitted (23-FEB-1999) Genome Sequencing Center, Washington University School of Medicine, 4444 Forest Park Parkway, St. Louis, MO 63108, USA
/translation="mynynysrgnksmgnpprfheltdmpdngastsaaagmftrqds
Lalaaslqqrdrernpvdfmetqldldnylqcftdldvpadnydlndaelqkanilyd
Ddsyeqplnpyerhyaygpgfrnpgexeeqdgykmnfevktbeekkpetmktsktmt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida; Rhabbitina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis. 1 (bases 1 to 38846)
                                                                            TRRAIKRPSCYDDYQEEGETSLSDNDESYDDSYYRPKSSKKTAAAVPNFVPKTKARKY
NLKPDKEKVEPIYKLKRARNNDAVRKSRNKAKELQKQDEEYDEMKKRITQLEAELQS
EREGRERDQQLIKQLIREKESTSKGPRKSSRNALESFNKSNY"
977 c 1003 g 1556 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20039 GAGCCCGTAAATCGACACACGCCTACAGTAGTCATTTAAAGAATTACTGTAGTTTTCGC 20098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1468 GAGCCCGTAAATCGACACAAGCGCTACAGTAGTCATTTAAAGAATTACTGTAGTTTTCGC 1409
                                                                                                                                                                                                                                                                                                                                                                  2646 CCGTAAATCGACACACAAGGGCTACAGTAGTCATTTAAAGAATTACTGTAGTTTTCGCTACG 2705
                                                                                                                                                                                                                                                                                                                                                                                            23-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Caenorhabditis elegans clone W08E12, WORKING DRAFT SEQUENCE,
                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    * NOTE: This is a 'working draft' sequence. It currently consists of 1 contigs. The true order of the pieces is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 38846;
                                                                                                                                                                                                                                                        Length 4917;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 72; DB 19; Length 3884(
Pred. No. 7.36e-33;
0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38846: contig of 38846 bp in length.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The sequence of Caehorhabditis elegans clone Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Caenorhabditis elegans"
                                                                                                                                                                                                                                Score 71; DB 22; Ler
Pred. No. 4.31e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7662 g 11516 t
                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:6239"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="W08E12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AC006696.1 GI:4263242
HTG; HTGS_PHASE1.
Caenorhabditis elegans.
Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 (bases 1 to 38846)
Waterston, R.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ouery Match 0.9%;
Best Local Similarity 100.0%;
Matches 72; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          38846 bp
                                                                                                                                                                                                                                                             0.98;
                                                                                                                                                                                                                                                                                  Best Local Similarity 100.0%;
Matches 71; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8013 c
```

gene

```
hittp://webace.sanger.ac.uk/cgi-
bin/display7db=wormacc6class=Sequence &object=F53A2
Current Sequence finishing criteria for the C. elegans genome sequencing consortium are that all bases are either sequenced unambiguously on both strands, or on a single strand with both a dye primer and dye terminator reaction, from distinct subclones. Exceptions are indicated by an explicit note.

IMPORTANT: This sequence is NOT necessarily the entire insert of the specified clone. It may be shorter because we only sequence overlapping sections once, or longer because we arrange for a small overlap between neighbouring submissions.

This sequence is the entire insert of clone F53A2. The start of this sequence (1. .104) overlaps with the end of sequence AL0214B1. The end of this sequence (42621. .42724) overlaps with the start of sequence 299272.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E (bases 1 to 4224)

Wilson,R., Ainscough,R., Anderson,K., Baynes,C., Berks,M.,
Bonfield,J., Burton,J., Connell,M., Copsey,T., Cooper,J.,
Coulson,A., Craxton,M., Dear,S., Durthin,R., Favello,A.,
Fulton,L., Gardner,A., Green,P., Hawkins,T., Hillier,L., Jier,M.,
Johnston,L., Jones,M., Kershaw,J., Kirsten,J., Laister,N.,
Latrellle,P., Lightning,J., Lloyd,C., McMurray,A., Mortimore,B.,
O'Callaghan,M., Parsons,J., Percy,C., Rifken,L., Roopra,A.,
Saunders,D., Shownkeen,R., Smaldon,N., Smith,A., Sonnhammer,E.,
Staden,R., Waterston,R., Watson,A., Watson,A.,
Wilkinson-Sproat,J. and Wohldman,P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complement(join(1153. .1948,2644. .2809,2858. .2979,
3023. .3189,3624. .3748,4327. .4705,5046. .5115,5241. .5385,
4575. .5572,5631. .5690,6159. .6241,6317. .6727)}
                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
1 (bases 1 to 42724)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xxef="PID:e1347070"
/db_xxef="PID:e1347070"
/db_xxef="PID:e13877466"
/db_xxef="GI:3877466"
/db_xxef="SPTREME.045546"
/translation="MLLPSCLPRMKIDKKKMEKRKKHIHLHHIYISTTFSSIILSLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  On Nov 29, 1997 this sequence version replaced gi:1914312.
Coding sequences below are predicted from computer analysis, using
predictions from Genefinder (P. Green, U. Washington), and other
available information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  For a graphical representation of this sequence and its analysis
                                                         Caenorhabditis elegans cosmid F53A2, complete sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                   Direct Submission
Submitted (06-NOV-1996) Louis, MO 63110, USA. E-mail:
jes@sanger.ac.uk or rw@nematode.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Caenorhabditis elegans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /protein_id="CAB04449.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement(1153. .6727)
/gene="F53A2.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nature 368 (6466), 32-38 (1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="taxon:6239"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /chromosome="III"
/clone="F53A2"
                                                                                                                                                                                                                       Caenorhabditis elegans.
Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /codon_start=
                                    42724 bp
                                                                                                                                                             281546.1 GI:2653125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .4272
                                                                                                                                                                                                                                                                                                                                                                                        Lloyd, C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94150718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           elegans
                                 CEF53A2
                                                                                          Z81546
œ
                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                        ORGANISM
                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE
                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gene
                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                          VERSION
```

```
TSTTTLQTSTTTSRPRTTYTKQTTTVVVRELADGEDDEELEGKLSOKKRRR

TSGAELUSSSKSQFSLEYVLTVLGGTTTVVVRELADGEDDEELEGKLSOKKKRRR

HVSIOTRPLYKLRLVSTLTVLGFLILENRISTTFONTTYTVOVPRHEILIGKILD

ICNLKLHAYFOFLNKRVKINICKLQVQIEHPRKVVÖFQLRLILKELIGSNEDRIREF

KFORFDLSTVGTWLKARRIARHGIRFGWAGGVDLHGGOLLNEVDFFARPHLHGIVNAD

KFEVRRIYTDEEDERWYFP INRFLKRPITCDTLFILYGKDIVSLFRTITHQAVSNM

NAKNVLNFREGAHNVMAEKFHECPENFKNVVIOFVAPWNIEDVSANLLESVSIKLG

KFIRTTEGNQQRIGSTTFKLYFEEDDRIPKNVVNIOFVAPWNIEDVSANLLESVSIKLY

KFIRTTEGNQQRIGSTTFKLYFEEDDRIPKNVVNIOFVAPWNIEDVSANLLESVSIKLY

KFIRTTEGNQQRIGSTTFKLYFEEDDRIPKNVVNIOFVAPWNIGSTRNYLIAPENMHKVFA

KFIRTTEGNQQRIGSTTFKLYFEEDDRIPKNVNIOFVAFWNIGSTRNYLIAPENMHKVFA

KFIRTTEGNQQRIGSTTFKLYFEEDDRIPKNVNIOFVAFWNIGSTRNYLIAPENMHKVFA
                                 LIPGVLSTTCPHSVNSKIQECVQPVADJAKVLNNQDSRTSGSEFGSAFSLPNMGGRVF
BELGRENTRACSELERIGSARKILLAKFNGSVRDYRSTCFBHYTISLIDSSYGYLC
NEGYNTFMESAECHMELDRKRPSVKRCHDETIKEIEGANTESGVSMPAKVDRMCGALNF
FSGCVRSPIKODGGFSAWQVIYRVLKDTINTLAMPACQFTGTSQKLLSFQKEIDSLNNV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GSAQSLEYSIQEYAPLTERDPTTVFDSISNYASEISYAVSNGWNFVVEKISSFAFACT
DAFNSYNRYFGIGLIVLCITSILLLLAYLEIRHYFRSRTVRTPTLTKFTTLTSLHSDL
QGKSVFASPPSSILIGCSSINETQVLRDIIDCRTPSPIPDMLLPTRSLHSSQPHFFTN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             yk475b.3 comes from this gene; cDNB EST yk475b9.5 comes from this gene; cDNA EST yk452g6.5 comes from this gene; cDNA EST yk452g6.3 comes from this gene; cDNA EST yk452g6.5 comes from this gene; cDNA EST yk403al2.3 comes from this gene; cDNA EST yk403al2.5 comes from this gene; cDNA EST yk403al2.5 comes from this gene; cDNA EST yk392gll.3 comes from this gene; cDNA EST komes from this gene; cDNA EST EST yk391al2.5 comes from this gene; cDNA EST ENBL:D72300 comes from this gene; cDNA EST EMBL:D72147 comes from this gene; cDNA EST EMBL:D7310 comes from this gene; cDNA EST EMBL:D7310 comes from this gene; cDNA EST EMBL:T00154 comes from this gene; cDNA EST CEESC18R comes from this gene; cDNA EST CEESC12F comes from this gene; cDNA EST CEESC12F comes from this gene; cDNA EST CEESC12F comes from this gene; cDNA EST CEESC12F comes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IKIEHIAPNLVFENGTVPQEGSNSFQWYEEEVSNDACYSSNEYSGVKLCPFNIGFKSY
NTPPDQMQQLDKSISDNMACRMNVDFSGIDRLIQHGSEDMRTVGYGMRGMMKLLQIQH
EKLMGKKPDDVTTGLKASLVPARFLKEKTVIVRNLTDDADINVNKVFGQLTAQSSSLK
FCGPLVSPMGPLPARCDTFFWGNFSFLCPKNLLSVQRSLYFRYQKNAKMIFWSYLVIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /translation="MSRLKKRKNVQPEPVYFIHNKALTPPTSMFRFSHLLILTVLFNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEFTAESLMKCSTFVGKINYGFNGSKDSLLPQNEEILQDREPKVKSYKNLFVSYRDMV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement(join(18938. .19016,19106. .19299,20018. .20245,
20302. .20427.20612. .20778,20834. .20923,21567. .21648))
/gene="F53A2.3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /translation="MASRETILDVLAKLEECKETLNNSLNYDEAANSNGSSTFQDQSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NIVINAANVWIKNVVPDEQRKLYSTSIKPOQPQITFPAQLLNGPAGLLVRCLSVTGGD
NSSNAVNISLLFKQHVSNLFNHARSKSGITNSRKRKQQSEDYSYN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="SPTREMBL:045549"
//db_xref="SPTREMBL:045549"
//draslation="MSOYERPEDSVLLEMPOLINGSGOVPEMLDVLFEFLSRKTDFYSGAG
//draslation="MSOYERPEDSVLLEMPOLINGSGRANKEREOGERLABERAAQKAKEEEEFRNAKV
//OARTLILEKFDNAGGSRANKEAEERKRREEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="cDNA EST yk39la2.3 comes from this gene; cDNA EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16488. 18310
/gene="F33A2.2"
join(16488. 16766,17214. .17362,17908. .18310)
/gene="F53A2.2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23418. .24427
/genne="F55A2.4"
join(23418. .23521,23569. .24427)
/genne="F53A2.4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref="PID:93877467"
/db_xref="GI:3877467"
/db_xref="GI:3877467"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref="PID:93877468"
/db_xref="GI:3877468"
/db_xref="SPTREMBL:045548"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement(18938. .21648)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /protein_id="CAB04450.1"
/db_xref="PID:e1347071"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /codon_start=1
/protein_id="CAB04451.1"
/db_xref="PID:e1347072"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /protein_id="CAB04452.1"
/db_xref="PID:e1347073"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="PID:93877469"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="GI:3877469"
```

CDS

gene

29-MAY-1998

IN

DNA

43152 bp

```
CELF59B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                      DEFINITION
                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                               VERSION
                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Veries 1534. Comes from this gene; cDNA EST yk3385. Somes from this gene; cDNA EST yk3385. Somes from this gene; cDNA EST yk5041b. 3 comes from this gene; cDNA EST yk5041b. 3 comes from this gene; cDNA EST yk43863.3 comes from this gene; cDNA EST yk42591.3 comes from this gene; cDNA EST yk42591.3 comes from this gene; cDNA EST yk42645.3 comes from this gene; cDNA EST yk42645.3 comes from this gene; cDNA EST yk36495.5 comes from this gene; cDNA EST yk36495.5 comes from this gene; cDNA EST yk3641.3 comes from this gene; cDNA EST yk3641.3 comes from this gene; cDNA EST yk3641.3 comes from this gene; cDNA EST yk3641.5 comes from this gene; cDNA EST yk3641.5 comes from this gene; cDNA EST yk3651.5 comes from this gene; cDNA EST yk37511.5 comes from this gene; cDNA EST yk37511.5 comes from this gene; cDNA EST yk37511.5 comes from this gene; cDNA EST yk34507.3 comes from this gene; cDNA EST yk34507.3 comes from this gene; cDNA EST yk24109.3 comes from this gene; cDNA EST yk24109.5 comes from this gene; cDNA EST yk24109.3 comes from this gene; cDNA EST yk24109.3 comes from this gene; cDNA EST yk24109.3 comes from this gene; cDNA EST yk24109.3 comes from this gene; cDNA EST yk24109.3 comes from this gene; cDNA EST yk24109.3 comes from this gene; cDNA EST yk24109.3 comes from this gene; cDNA EST yk24109.3 comes from this gene; cDNA EST yk40465.5 comes from this gene; cDNA EST yk40465.5 comes from this gene; cDNA EST yk40465.5 comes from this gene; cDNA EST yk40465.5 comes from this gene; cDNA EST yk40465.5 comes from this gene; cDNA EST yk40465.5 comes from this gene; cDNA EST yk40465.5 comes from this gene; cDNA EST yk40465.5 comes from this gene; cDNA EST yk40465.5 comes from this gene; cDNA EST yk40465.5 comes from this gene; cDNA EST yk40465.5 comes from this gene; cDNA EST yk40465.5 comes from this gene; cDNA EST yk40465.5 comes from this gene; cDNA EST yk40465.5 comes from this gene; cDNA EST y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26847. .28871
/gene="F53A2.7"
join(26847. .26859,26930. .27082,27133. .27914,28285. .28439,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="SWISS-PROT:045551"
/translation="WSDSEIAFEKH&ISGEKEGMTETEQTTAPIYPLKRNWTWWYLND
FRNSWEDRLKKYYTFNTVSEFWALYDAIRPPSGLNALCDINVFRDDIQPMEVPENS
NGGRWLIVIDKGKTPEMVDAIWLEILMALVGEOFGRDMESICGLVGNYRGKGSKISVW
TKDCNDDETNMRIGVVLKEKLMAASKDHSKPLFDVIRYEDHESCQKKTSSVVKAKLSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RDMINACCVEFVKHIAREAQRIASODQRKIIYHEHVQKALQNLGFTPDYLEAADSVLD
ACKVEAEKKLRRKNSRLEKCGIPEEKLYEMQOELIQKARQOEIEQQLAHQQAQAAAVA
       !QWTQTLQELEVKIPIAAGFAIKSRDVVVKIEKTSVSVGLKNQAPIVDGKLPHAIKVE
                                  NCMWYIENGKAIVLTLEKINDMEWWNRFLDSDPPINTKEVKPENSKLSDLDGETRAMY
EKMMYDQRQKEMGLPTSDEKKKHDMLQOFMKQHPEMDFSNAKIG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="SPTREMBL:045550"
/translation="MQCFNTIFRLFTDMDEDNEIGLPQKGINQIIKEVVPEMRIANES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Db 37750 ATATCTCGTAGCGAAAACTACAGTAATTCTTTAAATGACTACTGTAGCGCTTGTGTCGAT 37809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1399 ATATCTCGTAGCGAAAACTACAGTAATTCTTTAAATGACTACTGTAGCGCTTGTGTCGAT 1458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25496. .26398
/gene="F53A2.6"
join(25496. .25550,25712. .26177,26224. .26398)
/gene="F53A2.6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 69; DB 21; Length 42724; Pred. No. 1.46e-30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                  jóin(24572. .24988,25071. .25208)
/gene="F53A2.5"
/note="f5ialiar to Archael histone like"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /protein_id="CAB04454.1"
/db_xref="PID:e1347075"
                                                                                                                                                                                                                                                                                                                              /protein_id="CAB04453.1"
/db_xref="PID:e1347074"
/db_xref="PID:93877470"
/db_xref="GI:3877470"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AANAQMFGGPSEGSLAPTDDDYDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="PID:93877471"
/db_xref="GI:3877471"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Note: remainder of annotations omitted.
                                                                                                                                           /gene="F53A2.5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HSSDAPVAEKSAV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 0.9%;
Best Local Similarity 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Db 37810 TTACGGGCT 37818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTACGGGCT 1467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              :69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gene
                                                                                                                            gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDS
                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ô
```

6

RESULT

```
Eukaryota: Metazoa: Nematoda: Secernentea; Rhabditia; Rhabditida; Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis. Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis. Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis. Rhabditinas; Ito 43152)

Wilson, R., Ainscough, R., Anderson, K., Baynes, C., Berks, M., Bonfield, J., Burton, J., Connell, M., Copsey, T., Cooper, J., Entron, M., Dear, S., Du, Z., Durbin, R., Fawello, A., Johnston, L., Gardner, A., Green, P., Hawkins, T., Hillier, L., Jüer, M., Johnston, L., Jones, M., Kershaw, J., Kirsten, J., Laister, N., Jatreinle, P., Lightning, J., Lloyd, C., Mownrap, A., Morthmore, B., Saunders, D., Shownkeen, R., Smaldon, N., Smith, A., Sonnhammer, E., Staden, R., Salston, J., Thierry-Mieg, J., Thomas, K., Vaudin, M., Waughan, K., Waterston, R., Watson, A., Weinstock, L., Wilkinson-Sproat, J. and Wohldman, P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The 5' cosmid is MO1F7, 200 bp overlap. Actual start of this cosmid is at base position 1 of CELF59B1; actual end is at 43152 of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (23-MAY-1998) Department of Genetics, Washington University, 4444 Forest Park Avenue, St. Louis, Missouri 63108, USA Submitted by:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Coding sequences below are predicted from computer analysis, using the program Genefinder(P. Green and L. Hillier, ms in preparation). Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NOTICE: This sequence may not be the entire insert of this clone. It may be shorter because we only sequence overlapping sections once, or longer because we provide a small overlap between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               all regions were double stranded or sequenced with an alternate chemistry; an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by sequence from more than one subclone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This sequence was finished as follows unless otherwise noted:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Department of Genetics, Washington University, St. Louis, MO 63110, USA, and Sanger Centre, Hinxton Hall cambridge CB10 IRQ, England c-mail: rw@nematode.wustl.edu and jes@sanger.ac.uk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Caenorhabditis elegans"
/strain="Bristol N2"
/db_xref="taxon:6239"
/clone="F5981"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NEIGHBORING COSMID INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The sequence of C. elegans cosmid F59B1
Unpublished (1998)
3 (bases 1 to 43152)
Caenorhabditis elegans cosmid F59B1. AF067943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genome Sequencing Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nature 368 (6466), 32-38 (1994)
94150718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  neighboring submissions.
                                                                                                                            ĀF067943.1 GI:3165541
                                                                                                                                                                                                        Caenorhabditis elegans
                                                                                                                                                                                                                                                Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 43152)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .43152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Waterston, R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CELF59B1
```

```
/translation="MNDTNGTIAALVEPTVSSOTORFFVTLAIFTISLTGLIGNLSVF
MFATTLKTLONSFGRLSASGSFAEAVLCGVFLFFYCPMVLLDIPTFKRVSAQVGLILL
FCDVOLTSHLFIAFNRLCALSFPIERNSFFNHRNRTILIALAYAIFCFTSIYMHLAN
NCNLFWYDFGWYFGVYTSADCDVIRFYVDFCKDFGVVALIAIVDVGTIVVHTKVTAPGM
KLLSANGASGKKROREITFVKQALIGGAVFATELVFFFIISGMQSQPVAIFLCTTVA
WSLVHTIDPLVLILLNREFRNMLMKNPLTKRTTRVTYSITQAIDNTSSHTHN"
                                                                                                                                                                           /translation="MYRKTIVVLAICALLFVSSIDCKKVAKDKKGGKAEKAEKVKKVK
AEKIVIVDEPEVVHEAAPEEVHHAPEEVEEAEEVVVVKQPVAQKHKISPPKSLKVTSA
FETCKLECRKQRDAVQAADYVEQLRRELASAQAALDAENAPVVNAHHAQAQHVEPVDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /translation="MSANPLSILQPGTGLFNTHVTLFDVNKAIKEQMSTESEITAESK
MEVIGDGNGFSSRVLLISCNWTIPSAHLPKKLILKIVSFVHIQALIDKGKQQNASLIT
KEVEEQMYAYFESSCKKMHNQEMNFYEVAGKFNSKTLLIPRVYFYTKLDEKNSNKGFI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GMEYVEGSIVRHSYDTCTIEEIQPILRAIAKLQALSLONPAEISKDLOKIDNGAIFOE
TLKMMLSESGIKGIFEQCRNLERSRFGEKVDRIEEKRNEILDFEKAFNLNKVVGIKQN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VLCHGDLWAANFLWTENNGVFCATRIVDYOMSHLGNPAEDLYRLLVSTITGARQAHW
QQILEQFYSYFLNELGSGEAPYTLEQLKLSFKLYFPVGALALLPLFGPAVDAKLEGMD
SEKAEKCRHLKMSTKPLSILQPGTGLFNTHVTLEDVNKAIKEQMSTESELTAESKMEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IGEGNGFSSCVILITCHWTIPSSHLPKKLILKIVSFVHVQGLINKSNEEGNSVMSPEE
BEHVHAHFFSKGQKGHNLEVBECEAFGHLEGTLLPKVFFSQKFEEDDFDKGFVGMEFV
BGSVVHCYENVYVDELQPILAFARLQALGISTEGST
LKGIFDQSRNIDQKLSEKVERIEQNHKEILNLETVLNINKVYGIDQKVICHGDWAAN
                                                                                                                                                                                                                                                                                                                                                complement(join(17869. 17933,18236. 18503,18667. 18842,
18941. 19017,19751. 19897,19950. 20110,20262. 20354))
/gene="F59B1.7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ILWTQTDGGFIADKVLDYQESHWGNPAEDLVRLLVSTISGADRQSHWEHILEQFYTYF
TDEIGSNNAPYTLEQLKTSFKLYFPVGALTLISLFGPAVDMKLQGMESGKAENYRRIV
IEKVDCLLDDVLNFHDFNKKFTGKN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement(join(25090. .25296,25355. .25516,25569. .2567
26091. .26724,27263. .27424,28077. .28199,28247. .28408,
28463. .28566,29655. .30312,30980. .31135))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Db 13755 GCAAAATATCTCGTAGCGAAAACTACAGTAATTCTTTAAATGACTACTGTAGCGCTTGTG 13814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1394 GCAAAATATCTCGTAGCGAAAACTACAGTAATTCTTTAAATGACTACTGTAGCGCTTGTG 1453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="contains similarity to melatonin receptors"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 21; Length 43152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 72; DB 21; Length 4315
Pred. No. 7.36e-33;
0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ΙΝ
                                                            /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /evidence=not_experimental
/protein_id="AAC17660.1"
/db_xref="PID:93165543"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCUS CELF59B1 43152 bp DNA DEFINITION Caenorhabditis elegans cosmid F59B1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /evidence=not_experimental
/protein_id="AAC17659.1"
/db_xref="PID:g3165542"
/db_xref="G1:3165542"
                                                                                                                                                                                                                                                                                                          .20354)
                                                                                     /protein_id="AAC17663.1"
/db_xref="PID:93165546"
                                                                                                                                                 /db_xref="GI:3165546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="GI:3165543"
                                                                                                                                                                                                                                                                                                complement(17869.
/gene="F59B1.7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Note: remainder of annotations omitted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene="F59B1.8"
'gene="F59B1.2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="F59B1.8"
                            /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           32954. .34638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 0.9%;
Best Local Similarity 100.0%;
Matches 72; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Db 13815 TCGATTTACGGG 13826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10
                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                               CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene-"F59B1.2"
join(16526. .16623,16705. .16900,17053. .17121,17595. .17717)
                                                                                                                                                                                                                                                       /evidence-not_experimental
/protein_id="AAQ17662.1"
/db_xref="PlD:93165545"
/db_xref="G1:3165545"
/translation="MSQEYNYTDPLNLVVAFLLGTIGTFGVVCNSLIVYIFLKEKSEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                        OIVLMAINRECAMFEPTKYSRIFSLSHTTIILVLIYLRIAQKIYEWIPESAKGCYTL
STRKTAMKYSSAPGCDYVDGAPEVIKYTFITTAFLARILKHILHYKKSNSSQVAV
ERKKRAMKILNFIQTILLDSLYLIDITFTFELRFVDFITLFILKHFKFQFLEHSPCV
DIFLWNFYLGMPTFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TAFNVICEFRALSNILILTTIFLITYLPQALLGYSPYPPALESWFINTSNPLYLGNEH
QIVLIAMNRFCAMFFPTKYSRIFSLFHTTIILVLIYLSRIAQEIYEWLPWSAKGCYKL
FSTEDFVVKYISAPDCDWVDNAPKIIKYTFIATAILNFITFLKILHFYKFLEHYPFVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /translation-"MDNRVYATVHLTDRTLQLYLTNIFNCLATPVNFLAFYLLIKHSR
RETKLFKYTLLISHLFFYVSNIFYGTIANNLLNAFWSAAIWIFLFAGFVYFTFMILVV
RLKTVARKGKIFDFSNRSYZIFCVILALYIIGPISAIWIRSYCTRDQQIAYVTEHFPK
NLMVFDNPSYHVDVSVSNQRWLIIIMLILIFSGFMIYSLLYLMIVLEISKQATSKSLK
                                                                                                                                                                                                                                                                                                                                                                                                            TAFNVICFFRAISNVIILTTIFLITYLPKTLLGYSPYPPAIESWFINTSHPLYLGNEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /translation="MSQEYNYTDPLNLVVAFLLGTIGIFGVVCNALIVYVFFKEKSKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ISRKRKKESQIYQIVLITHCFTLMLSQVYWGSFHSIVFLFPFFGLYGIGYLAFFLSSY
VLVIIWIFLFAITVFTMFIILILRLRGVTRKNSNFYFSTTAYSIFSAFFAMYIAIPMP
FCWISAGSSISETQDFVRKFYPNATKVLDIPGIFVYTDSWKFHRILVVAMYLLVSGGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VSFLKLSSQQAALHLSMSNHNLRNPAAMQTLERENSKISQKSAERYDYSELTVWHVSC
SNPTFSNSQCIQGPRGGHNYHDNHNQRNFCIVSNSLRHNNILSKHTIQAGCNNVYSCS
TQTAKCGIDYSSFGSSTNLIIFKSE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complement(join(12634. .12826,13056. .13140,13183. .13296,
13414. .13687,14051. .14149,14558. .14872))
/gene="F59B1.6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /translation="MNNFSVNSHFFAVIENDNRSLQLPLMNLINVISTIIVFILLYAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IFLFIMIIFNEKLAFLKTKIKKKIVLPIIGGGHPRQGQTSVTTYSYGNNFFNTVN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(join(5565. .5727,5810. .5844,6104. .6270,6326. .6558,6633. .6766,6817. .6879))
//gene="F59B1.5"
/note="contains similarity to melatonin receptors"
                                                                               .3071,3121. .3287,3338. .3570,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complement(join(8203. .8304,8359. .8472,8520. .8636,
9707. .9955,10007. .10225))
/gene="F59B1.4"
                                                                                                                                                                 /note="contains similarity to seven trans-membrane
receptors (Pfam: 7tm_1.hmm. score: 11.62)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTNHQRKVTNSMVFQILIVGTTVFPAILLQIRNAFVEPEEDTRGNIWQ'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NADH-ubiquinone/plastoquinone domains (Pfam: oxidored_ql.hmm, score: 13.37)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /evidence=not_experimental
/protein_id="AAC17665.1"
/db_xref="PID:93165548"
/db_xref="G1:3165548"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /evidence=not_experimental
/protein_id="AAC17664.1"
/db_xref="PID:g3165547"
/db_xref="G1:3165547"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /evidence=not_experimental
/protein_id="AAC17661.1"
/db_xref="PID:93165544"
/db_xref="G1:3165544"
                                                                                                           .3780,3827. .3889))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement(12634. .14872)
/gene="F59B1.6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      complement(8203. .10225)
/gene="F59B1.4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement(5565. .6879)
/gene="F59B1.5"
            complement(2823. .3889)
                                                                        complement(join(2823
                                                                                                                              /gene="F59B1.3"
                                         /gene="F59B1.3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /codon_start-1
                                                                                                                                                                                                                                 /codon_start=]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /codon_start=1
            gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             dene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDS
```

ö

```
16526. 17717
/gene="F59B1.2"
join(16526. 16623,16705. 16900,17053. 17121,17595. 17717)
/gene="F59B1.2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /translation="munfsvvshffaviendnrslolplmnlinvistilvfilltai
isrrrkesqivqivlithcftlmlsqvymgsfhslyflfffpgcigigtapflssv
vlviimifleaitvftmfillilrigkgvtrstyfstafsfffarfirai
vecisagssisetodfvkfrynatricutytdswffhilvvamvllvsgdv
vsflklssqoaalhlsmsnhlrnpamqtlebrenskisgksafrysseltywhvsc
snptesnsociqofpgchnyhdnhnqrnfcivsnslrhnnilskhtioagcnnnvscs
tqfarcgidyssfgsstnliifkse"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAFNUICFFRALSNILILTTFELITYLPQALLGYSPYPPAIESWFINTSNPLYLGNEH
QIVLIAMNRFCAMFFPTKYSRIFSLFHTTILLVLIYLSRIAQEIYBWLDWSAKGCYKL
FSTEDFVVKTISAPDCDWVDNARKIIKYTFIATAILNFITFKILHFYKFLEHYPFVD
IFLFIMIIFNBKLAFLKKKKKKVLPIIGGGHPRQGGTSVTTYSYGNNFFNTVNN'
complement (8203. 10225)
/gene="F5981.4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RETKLFKYTLLISHLFFYVSNIFYGTIANNLLNAFWSAIWIFLFAGFVYFTFMILVV
RLKTYARKGKIFDFSNRSYYIFCVILALYIIGPISAIWIRSYCTRDQQIAYVTEHFPK
NLMYFDNPSVHYDVSVSNQRMLIILMLILIFSGFMIYSLLYLMIVLEISKQATSKSLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="G1:3165548"
/translation="MSQEYNYTDPLNLVVAFLLGTIGIFGVVCNALIVYVFFKEKSKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /translation="MDNRVYATVHLTDRTLQLYLTNIFNCLATPVNFLAFYLIIKHSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement(join(12634. .12826,13056. .13140,13183. .13296,
13414. .13687,14051. .14149,14558. .14872))
/gene="F59B1.6"
                                                                                                                                                                                                                                                                                              /db_xref="G1:3165545"
/translation="MSQEYNYIDPLNLVVAFILGTIGTEGVVCNSLIVYIFLKEKSEQ
                                                                                                                                                                                                                                                                                                                                                                                                          FSTKYFAWKY SSAPGCDYVDGAPEV IKYTFITTAFLNFITFLKILHFYRKSNSSQVAV
EAKKRMRKNILNFIQTILLDSLYLIDITFTFELRFVDFITLFILKHFRFQFLEHSPCV
                                                                                                                                                                                                                                                                                                                                                       TAFNVICFFRAISNVIILTTIFLITYLPKTLLGYSPYPPAIESWFINTSHPLYLGNEY
                                                                                                                                                                                                                                                                                                                                                                                QIVLMAINRECAMFFPTKYSRIFSLSHTTIILVLIYLYRIAQKIYEWLPESAKGCYTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(join(8203. 8304,8359. .8472,8520. .8636,
9707. .9955,10007. .10225))
/gene="F59B1.4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complement(5555. .6879)
/gene="FS9B1.5"
/gene="FS9B1.5"
6326. 6558, 6603. .6766,6817. .6879))
/gene="FS9B1.5"
                         .3071,3121. .3287,3338. .3570,
                                                                                                              /note="contains similarity to seven trans-membrane receptors (Pfam: 7tm_1.hmm. score: 11.62)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="contains similarity to melatonin receptors"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTNHQRKVTNSMVFQILIVGTTVFPAILLQIRNAFVEPEEDTRGNIWQ"
complement(12634. .14872)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NADH-ubiquinone/plastoquinone domains (Pfam: oxidored_q1.hmm, score: 13.37)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="contains similarity to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /evide_ce=not_experimental
/protein_id="AAC17664.1"
/db_xref="PID:93165547"
/db_xref="GI:3165547"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /evidence=not_experimental
/protein_id="AAC17661.1"
/db_xref="PID:93165544"
/db_xref="G1:3165544"
                                                                                                                                                                                                      /evidence=not_experimental
/protein_id="AAC17662.1"
/db_xref="PID;93165545"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /evidence=not_experimental
                         complement(join(2823. .30;
3617. .3780,3827. .3889))
/gene="F59B1.3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /protein_id="AAC17665.1"
/db_xref="PID:93165548"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="F59B1.6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DIFLWNFYLGMPTFS
/qene="F59B1.3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /codon_start=1
                                                                                                                                                                                   /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDS
                                  CDS
                                                                                                                                                                                                         Rhabditina; Rhabditoidea; Rhabditinae; Caenorhabditis.

Rhabditina; Rhabditoidea; Rhabditinae; Caenorhabditis.

Wilson, R., Ainscough, R., Anderson, K., Baynes, C., Berks, M.,

Bonfield, J., Burton, J., Connell, M., Copsey, T., Cooper, J.,

Coulson, A., Craxton, M., Dear, S., Du, Z., Durbin, R., Favello, A.,

Fulton, L., Gardner, A., Green, P., Hawkins, T., Hillier, L., Jier, M.,

Johnston, L., Jones, M., Kershaw, J., Kirsten, J., Laister, N.,

Jeareille, P., Lightning, J., Lloyd, C., McMurray, A., Mortimore, B.,

O'Callaghan, M., Parsons, J., Percy, C., Rifken, L., Roopra, A.,

Saunders, D., Shownkeen, R., Smaldon, N., Smith, A., Sonnhammer, E.,

Staden, R., Sulston, J., Thierry-Mieg, J., Thomas, K., Vaudin, M.,

Waughan, K., Waterston, R., Wateson, A., Weinstock, L.,

Wilkinson-Sproat, J. and Wohldman, P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The 5' cosmid is MO1F7, 200 bp overlap. Actual start of this cosmid is at base position 1 of CELF59B1; actual end is at 43152 of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (13-MAY-1998) Department of Genetics, Washington University, 4444 Forest Park Avenue, St. Louis, Missouri 63108, USA Submitted by:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Coding sequences below are predicted from computer analysis, using the program Genefinder(P. Green and L. Hillier, {\tt ms} in preparation).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This sequence was finished as follows unless otherwise noted: all regions were double stranded or sequenced with an alternate chemistry; an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This sequence may not be the entire insert of this clone.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ن
                                                                                                                                                                                      Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                It may be shorter because we only sequence overlapping sections once, or longer because we provide a small overlap between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.2 Mb of contiguous nucleotide sequence from chromosome III of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Department of Genetics, Washington University, St. Louis, MO 63110, USA, and Sanger Centre, Hinxton Hall Cambridge CBIO IRQ, England e-mail: rw@nematode.wustl.edu and jes@sanger.ac.uk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NEIGHBORING COSMID INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .43152
/organism="Caenorhabditis elegans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The sequence of C. elegans cosmid F59B1
Unpublished (1998)
3 (bases 1 to 43152)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence from more than one subclone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genome Sequencing Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      complement(2823. .3889)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nature 368 (6466), 32-38 (1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /strain="Bristol N2"
/db_xref="taxon:6239"
/clone="F59B1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /chromosome="V"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               neighboring submissions.
                                                                                                                              Caenorhabditis elegans. Caenorhabditis elegans
                                                                  AF067943.1 GI:3165541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to 43152)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Waterston, R.
            AF067943
q3165541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CELF59B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94150718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NOTES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
               ACCESSION
                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                    KEYWORDS
                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                              SOURCE
```

```
/translation="MGANDESILQPOGGLENHHYTLEDVNKAIKEQMSTESELTAESK
/translation="MGANDESILQPOGGLENHHYTLEDVNKAIKEQMSTESELTAESK
MEVIGGGNGFSSRVLLISCNWTIPSAHLPKKLILKIVSFVHIQALIDKGKQQNASLIT
KEVEEQNAYAFESSCKKHNOEMNFYENGKENSKTLIPKYYFTKLDEKNSNKGFI
GMEYVEGSIVRHSYDTGTIEEIQPILRATIAKLQALSLQNPAEISKDLKNIDNGIFGE
TLKMMLSESGIKGIFEQCRNLERSRFGEKVDRIEEKRNEILDFERAPNLMVYGIKON
VLCHODLWAANFLWTENGYGERAPTILGPKLKSFKLYFFYDRALDFERAPNLMVYGIKON
QQILEQPYSYFLINGLGSGEAPYTHYLEGNKLSFKLYFFYDRALEGPRAVDAKLEGMD
SEKAEKCRHLKMSTRELSILDPGTGLFNTHYTLEDVNKAIKEGMSTESELTAESKMEY
IGEGNGFSSCVILITCHWTIPSSHLFKKLILKTVSFYHYGGLLNKSNEEGNSYMSPEE
EAHVHAHFEKGCOKGHNLEVBFCEARGHLEGILLPKYFFSQKFEEDNPNKGFYGMEFV
EGSVVRHCYENVYVDELQPILKALARLQALSJTSFSCRNLDNNEAFEESLENDMLSEDG
LKGIFDQSRNTDQKLSEFYERIEGNNHKEILMLETVINLNKVYGIDGKVICHGDLWAAN
ILWTQTDGGFIADKVLDYQESHMGNPAEDLYRLLVSTISGADRQSHWEHILEQFYTYF
TDEIGSNNAPYTIEDQLKTSFKLYFPYGALTLISLFGFAVDMKLQGNESCKAENYRRIV
                                                                                                                                            /translation="myrrtivylaicallevssidckkvakdkkggkaekrekvk
Aekivivdepevvheaapeevhhapeeveeaeevvvvkopvaqkhrisppksikvysa
Fetcklecrkordavqaadyveqlrrelasaqaaldaenapvvnahhaqaqhvepvdn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /translation-"MNDINGTIAALVEPTVSSQTQRFFVTLAIFTISLTGLIGNLSVF
MRATIKHTOONSFGRLSASOGSAFALVCGVFFFFYCHWYLDIPTFRRVSAOVGLILL
FCYDVCIFSHLFIAFRRLCAISFPIEVNSFFNRNTRILIALAYAIFCFTSIYMHLAN
NCNLPYVDFGWYFGVNTSADCDVIRFYVDFCKROFGVALIAIVDVGTIVMIKYTAPGM
NSLAFARVGSOKKRQRRIFFYKQALIGGAVFATELIVFFFIISGMQSOFVAIFFCTVA
WSLVHTIDPLVLLILMREFRAMLARNPLTKRTTRVTSITQAIDNTSSHTHN"
COMPLEMENT (25090. 31135)
                                                                                                                                                                                                                                                                                                                                                                    complement(join(17869. .17933,18236. .18503,18667. .18842,
18941. .19017,19751. .19897,19950. .20110,20262. .20354))
/gene="F59B1.7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="F5591.8"
complement(join(25090. .25296,25355. .25516,25569. .2567.
26091. .26724,27263. .27424,28077. .28199,28247. .28408,
28463. .28566,29655. .30312,30980. .31135,)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="contains similarity to melatonin receptors"
/evidence=not_experimental
/protein_id="AAC17663.1"
/db_xref="PID:93165546"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /evidence=not_experimental
/protein_id="AAC17660.1"
/db_xref="PID:g3165543"
/db_xref="G1:3165543"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /evidence=not_experimental
/protein_id="AAC17659.1"
/db_xref="PID:93165542"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IEKVDCLLDDVLNFHDFNKKFTGKN"
                                                                                                                                                                                                                                                                                                                complement(17869. .20354)
                                                                                                        /db_xref="GI:3165546"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="GI:3165542
                                                                                                                                                                                                                                                                                                                                                /gene="F59B1.7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32954. .34638
                                                                                                                                                                                                                                                                                                            gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
```

Note: remainder of annotations omitted.

```
Query Match 0.9%; Score 72; DB 21; Length 43152;
Best Local Similarity 100.0%; Pred. No. 7.36e-33;
Matches 72; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Db 13964 CCCGTAAATGGACACAAAGGCTAAGTCATTTAAAAGAATTAACTGTAGTTTTCGCTAC 14023
```

- Db 14024 GAGATATTTTGC 14035

```
RESULT 11
LOCUS
CELY44E3A 48088 bp DNA
DEFINITION Caenorhabditis elegans cosmid Y44E3A.
ACCESSION AF106589
,ID 93886084
```

```
Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida; Rhabditina; Rhabditida; Rhabditida; Rhabditina; Rhabditida; Bukaryota; Metazoa; Nematoda; Secernentea; Peloderinae; Caenorhabditis. I (bases 1 to 48088).

S Milson, R., Ainscough, R., Anderson, K., Baynes, C., Berks, M., Bonfield, J., Burton, J., Connell, M., Copsey, T., Cooper, J., Coulson, A., Craxton, M., Dear, S., Du, Z., Durbin, R., Favello, A., Fulton, L., Gardner, A., Green, P., Hawkins, T., Hillier, L., Jier, M., Johnston, L., Lighting, J., Lloyd, C., Mchurray, A., Mortimore, B., O'Callaghan, M., Parsons, J., Dercy, C., Rifken, L., Roopra, A., Saunders, D., Shownkeen, R., Smaldon, N., Smith, A., Sonnhammer, E., Staden, R., Sulston, J., Therry-Mieg, J., Thomas, K., Vaudin, M., Waughan, K., Waterston, R., Watson, A., Weinstock, L., Wilkinson-Sproat, J. and Wohldman, P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (15-NOV-1998) Department of Genetics, Washington University, 4444 Forest Park Avenue, St. Louis, Missouri 63108, USA (bases 1 to 48088)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (05-WAR-1999) Department of Genetics, Washington
University, 4444 Forest Park Avenue, St. Louis, Missouri 63108, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Department of Genetics, Washington University, St. Louis, MO 63110, USA, and Sanger Centro, Hintxon Hall Cambridge CB10 IRQ, England, e-mail: rw@nematode.wustl.edu and jes@sanger.ac.uk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The sequence of C. elegans cosmid Y44E3A Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Woessner, J., Graves, T. and Keppler, D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genome Sequencing Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nature 368 (6466), 32-38 (1994)
94150718
                                                       Caenorhabditis elegans.
     GI:3886084
                                                                                     Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 48088)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 48088)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         by:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Waterston, R.
  AF106589.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Waterston, R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              elegans
                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
TITLE
                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                             KEYWORDS
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                          SOURCE
```

NOTICE: This sequence may not be the entire insert of this clone. It may be shorter because we only sequence overlapping sections once, or longer because we provide a small overlap between neighboring submissions.

This sequence was finished as follows unless otherwise noted: all regions were double stranded or sequenced with an alternated.

This sequence was finished as follows unless otherwise noted: all regions were double stranded or sequenced with an alternate chemistry; an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by sequence from more than one subclone

## NEIGHBORING COSMID INFORMATION:

This segment of YAC Y44E3 was sequenced to span the gap between w01B11 and W05F2. The 5' clone is W01B11, 200 bp overlap;3' clone is W05F2, 2300 bp overlap. Actual start of YAC Y44E3 is at base position 1 of CEIX44E3B; actual end is at 10513 of CELK03E5

## NOTE

Coding sequences below are predicted from computer analysis, using the program Genefinder(P. Green and L. Hillier, ms in preparation).

RES Location/Qualifiers
source 1.480MB "Caenorhabditis elegans"
/strain="Bristol N2"

FEATURES

05-MAR-1999

gene

CDS

```
NITNKNCGDAGWFEGELHGKKGLFPDNFVELVQVPLGTESGARHGSISRQATLTFVSH
                                                                                                                                                                                                                                                                                                                              /db_xref="GI:3886085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Note: remainder of annotations omitted.
                                                           35821. .37479
/gene="Y44E3A.1"
                                                                                                                                                                                                              /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     unordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           32667 TCGATTTACGGG 32678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1454 TCGATTTACGGG 1465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AC006891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                    gene
                                                                                                                                                  .1745,2631. .2867,2914. .3142,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VLFLENMSNVLKITLNLKVVAPEKVASIQKPDQRDRSSTGESTTGEPSIDNSATDQVA
ELQHITKNRARPKRRRMSWNANRRSSDESPRGLSSPTSISTVNPMSASMRVPATA
KEISIPSNSSATSSPFKSSIAPPSSASKPALRPIPSNSLADDSTSSTSAIRKLASPD
SQKSPNLPPSDYVSRAEYDALLDRFRALESRVLAIEKIRF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="GI:3886089"
/translation="MAQVGETEVVAGNVRDIVNRLSRDMINRNPFIVHQQVERRAPPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OPOAOIYVATYAYSSKODDELSFVVGDLIELISDVEDGWSKGKLKSTGAVGMFPTNFV
TLKPTPSTSAAAVAPAASASTSAGSAARTPAKSIGSEVVMRSEPKAIDRTPSTIISDP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SNVPEERXEDGVARFLGDLFFTCSLIDFADLISDNIFGNVYMYYFTYRSSANPWPKWM GVMHGYEIEYAFGQPYWRPHLYDQTHLEDEKRLSSIIMQIWANFANTGLVFEYSQELS GADKLVPADLIAVFRYSQHLILDV"

complement(15509. .16029)

/gene="Y44E3A.3"

complement(join(15509. .15740,15938. .16029))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KSGSIINSWASATPPTWLDLSFRLAKKVNCSSPDMNAIVKCLRSVPAHLVQAEADNIS
GDIGPPMTFAYVPVSSDANFFQGDVFQKLANKQFKKDVNIIFGSVKDEGTYWLPYYMS
LPKYGFAFNHTISAEDPHNRALITRDHYEESMRAFMPYFAGSKLVLNAFMNSYEHVST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement(join(17307. .17476,18425. .18647,19600. .19806,
20423. .20584,20720. .20760,20880. .20997,21113. .21277,
21379. .21417))
/gene="Y44E3A.4"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MPAIAPSSSALKSNFAALQEKWSRKILQKKNRKNNQFFLGLFLKNFKKNSNLKRKNEK
KPKNQKKLSEKIDSIFSEFKKNFFSKKIETNKNCESFSENHNSEKNQFSLFFCENFI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="contains similarity to Src homology domain 3 (Pfam: PF00018, Score=116.8, E=4e-31, N=2)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APVLKALETKFSSTFASSAASASTDAETTKTKEMARVKFVYNPQHDDELALKEIDMLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                     /translation="MYKSWPYCRLNHYWGTTFDGAKVSAFLGVPYAKPPIGSRRFKWA
EMIDRWSGELEARTLAKTCYLTIDSAFPQFPGAEMWNPPGAISEDCLNMNIWVPEDHD
GSVMVWIYGGGFFSGTPSLDLYSGSVFAAKEHTIVVNVNYRLGPFGFLYFGDDSPIQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /translation="MSIAIKDDDEFKTIFAEKKTOPVILFFTASWCGPCQMIKPRVEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /translation="MKDKIFKKIPTKKADPPPSTIAPAAPSAPAPSQLNPTSTSPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cómplement(join(23897. .24184,25332. .25535,26147. .26490,
27294. .27396,28048. .28065))
/gene="Y44E3A.5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NMGLMDQQLALRWVHENIGAFGGDRSRVTLFGESAGSASTTAHLFAPNSHKYFRNIIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LAAEHKDRLSILKIDVDECDGVGEEYEINSMPTFLLIVDGIKKDQFSGANNTKFEEMV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="contains similarity to thioredoxins (Pfam: PF00085, Score=99.8, E=9.3e-29, N=1)"
                                                                                                                                                                                                                                          //note="gimilar to carboxylesterases (Pfam: PF00135,
Score=363.2, E=4.9e-106, N=1)"
/codon_start=1
                                                                                                                                                                              3398 .3573,3678 .3881,4294 .4341))
/gene="Y44E3A.2"
                                                                                                                                                            .795,1321.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /evidence=not_experimental
/protein_id="AAC78231.1"
/db_xref="PID:93886089"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /evidence=not_experimental
/protein_id="AAC78229.1"
/db_xref="PID:g3886087"
/db_xref="GI:3886087"
                                                                                                                                                                                                                                                                                                                                    /evidence=not_experimental
/protein_id="AAC78228.1"
/db_xref="PID:93886086"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /evidence=not_experimental
/protein_id="AAC78230.1"
/db_xref="PID:93886088"
/db_xref="GI:3886088"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement(23897. .28065)
/gene="Y44E3A.5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(17307. .21417)
                                                                                             complement(516. .4341)
/gene="Y44E3A.2"
                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="GI:3886086"
                                                                                                                                                         complement(join(516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="Y44E3A.4"
                                                                    /chromosome="I"
                                     /clone="Y44E3A"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /codon_start=1
                                                                                                                                                                                                                                                                         Score=363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
```

CDS

```
join(35821. .35973,36584. .36658,37128. .37228,37293. .37362,
37414. .37479)
/gene="Y44E3A.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="contains similarity to a human autoantigen (GB:U17474); coded for by C. elegans cDNA yk257g3.3; coded for by C. elegans cDNA yk258b5.3; coded for by C. elegans cDNA yk13b11.3; coded for by C. elegans cDNA yk28b37.3; coded for by C. elegans cDNA CEESK35RB; coded for by C. elegans cDNA CEESK35RB; coded for by C. elegans cDNA yk28g3.5; coded for by C. elegans cDNA yk28s3.5; /coded for by C. elegans cDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement(join(38013, 38053,38102, 38209,39472, 39618, 39672, 40080,40788, 41107,42027, 42464,42892, 43024, 43942, 44469,4587, 45725,45788, 45900,45946, 46074, 47071, 47218,47852, 47997))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NIELYTISREKSSIGFEIĞNNVTVQLNAPSDVDNGRERDSSNAHTKVIMDHKGDIQYL
RGRILISNGPIVGFRSIHESVGESMNLINLQTKQRHRFKDFPFRTIDLAFAQHHKYLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VLNADLSLVYFEVSDRCDPKKYLSIVNWPSYQSQGNEDQPKLSWCPYIQGEDEDDETI
HMIAVYLGRQLYIVNLGVLKEAGLGDTIEFEDAKKEDGGLFCHYFSDQPDKKNLRIAS
VCISPDSTAVAIAKTEGPVQFFTFNEENNTLTAAHCFEPRGFARNGLIDDLIFLDDLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PDRRKSLPFWRSCVVVSNDGHKVALYECQSWKCLGRIRFETTRAINKFVSISDPAANF
VHLLDVDGMNVFTIEIRNPFRTDEQPRFVGITQTSFCHSIFSIAPISSNTFENAEDSG
DDLFNNDSNDEESGDESDGTESDTRWKHTKIRRHFVAMGKRSMVELQLTLKQHIPSPV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTVAAESSQKEPSPSVYVDTETPEHQQLQNSGGLLMKVAPQTSSIDVESVNQKLDDVI
AALARIEADRKNSNEQMVQQIVTALELKPQFFQVSDENIRMREGYMLNRIEQVCENGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LDTTAAIRNOLANLNONMETFYRDOGVETÄEYISORVGSTTRNALAECILPSFERSCE
VLFERLNEHFRHGINEYLATTSOMIOGTAMATMOMAAOOOOOKGELERIALLRMIETN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PEEAVEAALNKADMSILEFVCSKINPEKIVIPGNTKLSQKCLVSLVSQFTATLSSDRD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /translation="MDSEHHEIFQFAISLLSESPTFLHSLYPPPAVPLAFRVTDYAVR
RVSEKQNILLHNYFLNKYEIGKMNAEIVLVGDAFFNERAQYHGFLRLNYRILHRYEQI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /translation="MSQMQKLGSKSKGQNPNKGDEVEMLRAGFKNKHGEAVKSQGQTM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LKFKWIELVIPEIDMSDPEIIHVVTPVAQKLVNALQDTPKNAEIIFQITEKLREKRFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              32607 GCAAAATATCTCGTAGCGAAAACTACAGTAATTCTTTAAATGACTACTGTAGCGCTTGTG 32666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HEIFLFSLNNARTMAQREYEIRKLEGINAIIISTRNMILSCEKKNECKLFSD"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AC006891 178553 bp DNA HTG 24-FEB-1999
Caenorhabditis elegans clone Y67D8y, WORKING DRAFT SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 48088;
KPPPVNPPQPAVPPKPAKISVVRRGFIEKIEKKMFHFISGNN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 0.9%; Score 72; DB 22; Length 4800
Best Local Similarity 100.0%; Pred. No. 7.36e-33;
Matches 72; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                               /evidence=not_experimental
/protein_id="AAC78227.1"
/db_xref="PID:93886085"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement(38013. .47997)
/gene="Y44E3A.6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /protein_id="AAC78232.1"
/db_xref="PID:93886090"
/db_xref="GI:3886090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AC006891.1 GI:4263457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
```

```
LE 2 (bases I to 17853)

S Waterston, R. H.

Direct Submission

LE Submitted (14-FEB-1999) Genome Sequencing Center, Washington
University School of Medicine, 4444 Forest Park Parkway, St. Louis,
MO 63108, USA

* NOTE: This is a 'working draft' sequence. It currently

* consists of 3 contigs. The true order of the places

* is not known and their order in this sequence record is

* arbitrary. Gaps between the contigs are represented as

* runs of N, but the exact sizes of the gaps are unknown.

* This record will be updated with the finished sequence

* as soon as it is available and the accession number will

* be preserved.
                                                                       Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida; Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis. [ (bases 1 to 17853)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HTG; HTGS_PHASE1.
Caenorhabditis elegans.
Caenorhabditis elegans.
Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
1 (bases 1 to 245805)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (23-FEB-1999) Genome Sequencing Center, Washington University School of Medicine, 4444 Forest Park Parkway, St. Louis, MO 63108, USA
On Mar 1, 1999 this sequence version replaced gi:4263186.
* NOTE: This is a 'working draft' sequence. It currently
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels 0; Gaps 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Db 126055 GAGCCCGTAAATCGACACAAGCGCTACAGTAGTCATTTAAAGAATTACTGTAGTTTTCGC 126114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACO06752 245805 bp DNA HTG 25-FEB-1999
Caenorhabditis elegans clone Y39H10, WORKING DRAFT SEQUENCE, 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 72; DB 19; Length 178553; Pred. No. 7.36e-33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              35017: contig of 35017 bp in length
35031: gap of unknown length
82926: contig of 47895 bp in length
82940: gap of unknown length
178553: contig of 95613 bp in length.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28 others
                                                                                                                                                      The sequence of Caehorhabditis elegans clone Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The sequence of Caehorhabditis elegans clone Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Caenorhabditis elegans"

    Mismatches

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 34476 c 33852 g 55384 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:6239"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                   Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="Y67D8y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AC006752.2 GI:4309798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 (bases 1 to 245805)
Waterston, R.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 0.9%;
Best Local Similarity 100.0%;
Matches 72; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Db 126115 TACGAGATATTT 126126
    HTGS_PHASE1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1408 TACGAGATATTT 1397
                                                                                                                                          Waterston, R.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35018
35032
82927
82941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   54813 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                     AUTHORS
TITLE
                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                  REFERENCE
                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
```

```
Direct Submission
Submitted (23-FEB-1999) Genome Sequencing Center, Washington
Noiversity School of Medicine, 4444 Forest Park Parkway, St. Louis,
MO 63108, USA
On Mar 1, 1999 this sequence version replaced gi:4263186.
* NOTE: This is a "working draft' sequence. It currently
* Consists of 6 contigs. The true order of the pieces
* is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditía; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
1 (bases 1 to 245805)
Waterston, R.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ob 193263 GCAAAATATCTCGTAGCGAAAACTACAGTAATTCTTTAAATGACTACTGTAGCGCTTGTG 193322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OY 1394 GCAAAATATCTCGTAGCGAAAACTACAGTAATTCTTTAAATGACTACTGTGGGCTTGTG 1453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACO06752 245805 bp DNA HTG 25-FEB-1999 Caenorhabditis elegans clone Y39H10, WORKING DRAFT SEQUENCE, 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
consists of 6 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 245805;
                                                                                                                                                                    2691: contig of 2691 bp in length 2706: gap of unknown length 5448: contig of 2742 bp in length 14405: contig of 8942 bp in length 14420: gap of unknown length 1420: gap of unknown length 28005: contig of 13665 bp in length 28100: gap of unknown length 84320: contig of 56220 bp in length 84330: contig of inknown length 84335: gap of unknown length
                                                                                                                                                                                                                                                                                                                                                                                                                6 245805: contig of 161470 bp in length.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                75 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 72; DB 20; Length 245
Pred. No. 7.36e-33;
0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2691: contig of 2691 bp in length 2706: gap of unknown length 5448: contig of 2742 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The sequence of Caehorhabditis elegans clone Unpublished

    245805
/organism="Caenorhabditis elegans"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           77112 a 45383 c 45498 g 77737 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="taxon:6239"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone="Y39H10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Caenorhabditis elegans.
Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AC006752.2 GI:4309798
HTG; HTGS_PHASE1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 (bases 1 to 245805)
Waterston, R.H.
                                                                                                                                                                                                                                            5463:
14405:
14420:
                                                                                                                                                                                                                                                                                                                                                                                         84335:
                                                                                                                                                                                                                                                                                                                 28085:
28100:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0.9%;
Local Similarity 100.0%;
les 72; Conservative
                                                                                                                                                                                                                                                                                                                                                                   84320:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Db 193323 TCGATTTACGGG 193334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy 1454 TCGATTTACGGG 1465
                                                                                                                                                                                                                                                                  5464
14406
14421
28086
28101
84321
84336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
```

ORIGIN

```
94579:
94593:
                                                                                                                            64617:
64631:
                                                                                                                                                                                                                                                              124264:
                                                                                                                                                                                                                                                                                           141464:
                                                                                                                                                                                                                                                                                                             141478:
                                                                                                            55090:
                                                            45252:
45266:
55076:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Db 64566 ATTTACGGGCTC 64577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1457 ATTTACGGGCTC 1468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            283962
283976
                                                                                                                                                                                                                                                                            124265
124279
                                                                                                                                                                                                                                                                                                           141465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Job time : 13725 secs.
                                                                                                                            55091
64618
64632
75765
75779
94580
25123
32231
32245
37882
37896
45253
45267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
1 (bases 1 to 298195)
Waterston, R.H.
The sequence of Caehorhabditis elegans clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (24-PEB-1999) Genome Sequencing Center, Washington
University School of Medicine, 4444 Forest Park Parkway, St. Louis,
MO 63108, USA
                                                                                                                                                                                                                                                                 Score 72; DB 20; Length 245805;
Pred. No. 7.36e-33;
0; Mismatches 0; Indels 0; Gaps 0;
                                                                                                                                                                                                                                                                                                                                Db 193472 CCCGTAAATCGACACAAGCGCTACAGTAGTCATTTAAAGAATTACTGTAGTTTTCGCTAC 193531
                                                                                                                                                                                                                                                                                                                                                   Cp 1465 CCGTAAATCGACACAACGCTACAGTAGTCATTTAAAGAATTACTGTAGTTTTCGCTAC 1406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AC006890 298195 bp DNA HTG 24-FEB-1999
Caenorhabditis elegans clone Y67D8×, WORKING DRAFT SEQUENCE, 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MO 63108, USA

**NOTE: This is a 'working draft' sequence. It currently

**Consists of 23 configs. The true order of the pieces

** is not known and their order in this sequence record is

** arbitrary. Gaps between the configs are represented as

** runs of N, but the exact sizes of the gaps are unknown

** This record will be updated with the finished sequence

** as soon as it is available and the accession number will

** be preserved.
        5463: gap of unknown length
14405: contig of 8942 bp in length
14420: gap of unknown length
28085: contig of 13665 bp in length
28100: gap of unknown length
84320: contig of 56220 bp in length
84355: gap of unknown length
84355: contig of 161470 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2711: contig of 2711 bp in length 2725: gap of unknown length 5159; contig of 2434 bp in length 5173: gap of unknown length 7175: contig of 2002 bp in length 7189: gap of unknown length 9231: contig of 2042 bp in length 9245: gap of unknown length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                      /organism="Caenorhabditis elegans"
/db_xref="taxon:6239"
/clone="1599H10"
3 45383 c 45498 g 77737 t 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 unknown
of 7183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of 4240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of 4412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               contig
gap of
contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gap of
                                                                                                                                        Location/Qualifiers
1. .245805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Caenorhabditis elegans.
Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 (bases 1 to 298195)
Waterston, R.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AC006890.1 GI:4263458
HTG; HTGS_PHASE1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13499:
17911:
17925:
25108:
25122:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13485:
                                                                                                                                                                                                                                                                        Query Match 0.9%;
Best Local Similarity 100.0%;
Matches 72; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                        Db 193532 GAGATATTTGC 193543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        unordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                       Cp 1405 GAGATATTTTGC 1394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2712
2726
5160
5174
7176
7190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17912
17926
25109
               5449
5464
14406
14421
28086
28101
84321
84336
                                                                                                                                                                                                                             77112 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
TITLE
                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
```

```
64506 AAATATCTCGTAGCGAAAACTACAGTAATTCTTTAAATGACTACTGGGGCTTGTGTCG 64565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels 0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 298195;
                             gap of unknown length contig of $637 bp in length contig of $637 bp in length contig of $7357 bp in length contig of $7357 bp in length gap of unknown length in contig of $927 bp in length gap of unknown length contig of $1133 bp in length gap of unknown length gap of unknown length contig of $18801 bp in length gap of unknown length gap of unknown length gap of unknown length gap of unknown length contig of $14802 bp in length gap of unknown length contig of $14802 bp in length gap of unknown length gap of unknown length contig of $17186 bp in length gap of unknown length gap of unknown length contig of $1964 bp in length gap of unknown length gap of 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        308 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gap of unknown length contig of 14220 bp in length.
of 7108 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Caenorhabditis elegans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.9%; Score 72; DB 19;
00.0%; Pred. No. 7.36e-33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    94617 a 53720 c 56055 g 93495 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Search completed: Sun Aug 8 20:50:23 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="taxon:6239"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ouery Match
Best Local Similarity 100.0%; Pred. No.
Matches 72; Conservative 0; Misi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
1. .298195
        contig g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               clone="Y67D8x"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         161525:
161539:
181163:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       206333:
206347:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             283961:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      283975:
298195:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      253285:
```

	,	
		••
		••

```
1 AGATCTGABATAAGGTGATA.......TATCTGGTCAGCAAAGATCT 7653
TCTAGACTTTATTCCACTAT......TAAGACCAGTGGTTTCTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     n-geneseq35
1.part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13 14:part14 15:part15 16:part10 11:part11 12:part12 13:part13 14:part14 15:part15 26:part26 17:part17 18:part12 23:part23 24:part24 25:part25 26:part26 27:part27 28:part28 29:part24 30:part28 36:part28 37:part31 32:part31 33:part33 34:part34 43:part48 36:part40 41:part41 42:part42 43:part48 44:part44 45:part46 46:part46 47:part47 48:part48 44:part54 55:part55 56:part56 57:part57 58:part58 59:part59 60:part66 67:part57 58:part58 59:part59 60:part60 67:part50 67
Mon Aug 9 00:23:43 1999; MasPar time 1622.43 Seconds 1010.719 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                    n.a. - n.a. database search, using Smith-Waterman algorithm
                                                                                                      Release 3.1A John F. Collins, Biocomputing Research Unit. Copyright (c) 1993-1998 University of Edinburgh, U.K. Distribution rights by Oxford Molecular Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mean 9.051; Variance 3.852; scale 2.350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           >US-08-287-669-18
(1-7653) from USO8287669.seq (10 of 10)
7653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                271905 seqs, 107135622 bases x 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Post-processing: Minimum Match 0%
Listing first 1000 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dbase 0; Query 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TABLE jmetric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tabular output not generated.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gap 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nmatch STD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Description:
Perfect Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N.A. Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Statistics:
                                                                                                                                                                                                                                                                                                                                                                  MPsrch_nn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Database:
```

0.00e+00 0.00e+00 0.00e+00 0.00e+00 0.00e+00	6e-0	6e-0	8e+(	4e-(	8e+(	86+ (86+	8e+( 8e+(	4e+(	14e+	14e+	14e+	28e+	14e+ 28e+	14e+	286+ 146+	14e+	28e+	14e+ 14e+	54e-	14e+	81e- 81e-	81e-	81e- 81e-	81e-	81e	81e-	81e-	81e	14e4	14e	14e-	28e	14e 21e	21e	21e	97e	97e	.97e.	.21e
ed-3 (C7020T) gene. ed-3 (G2487A) gene. ed-3 (G5297A) gene. ed-3 (C5940T) gene. nterleukin-1 beta co enomic region contai	de Ced-3 gene p de Ced-3 gene p gene primer Pex	rimer Pex1 for c	mosomal microsa one DA165.	rphic repeat se	ine ribosomal c one BZ87.	mosomal microsa ce flanking mar	ce flanking mar	ori cytoplasmic	secreted protei	uman secreted proter nterococcus faecalis	asmodium ebl-2 gene	1 cDNA.	ouse receptor 4-1BB	receptor protei	receptor protel glyceraol kinas	bone morphogene	mylase coding s	cocccus pneumon	c region contai	ococcus raecalis odium var-1 gene	(G6536A) gene.	(G6297A) gene.	(C6485T) gene.	d-3 gene.	(C7020T) gene.	(C6322T) gene. (G6372A) gene.	gene.	(C6434T) gene. (C5940T) gene.	of recombinant	uman eyal gene conti	eyal gene conti	litary haemochrom	asma genitalium sequence repea	once of a microsa	satellite sequent t sequence found	leukin-1 beta co	orimer log-5 for	gene primer Log	ncicumoural phosphod
Q64745 Q64736 Q64739 Q64738 Q79970 Q79970	T3819 T3819 T3819	T315	V481	74814 T6568	Q552 V890	V481	T720	T674	V597	V596	T728	0972	T395	0861	0861	T477	T339	V523	0546	X134 T728	0647	0647	0647	1381	0647	0647	0544	0647	0468	T4/, V528	V528	V57	T580	034	D333	079	T31	054	7033 1103
000040C	<i>ম</i> ৰ ৰ ০	22	თ ო :	ກຸດ	ဝ က	<u>0</u> 0	2 2	10.	. II	[]	22.	15	24	7 7	14	29	29	47	ეთ	32	9	עס ע	o 0	24	ש ע	თი	ש פ	σ σ	00	2 4 2 8	48	50	27	· D	29	14	22	סת	35
7653 7653 7653 7653 2485 6560	0000	300	146	216	305	474 534			1729																				(8)	$\frac{151}{166}$		37.	800	12	H 2	121	111	i i	ÄÄ
60000 1.1.1.000 1.1.1.000	0000 4.4.4.4	000	0.0	e.e. 0	0.3	0.3	0.00	. e. e	0.3	e	. 0	9.3	.00		0.3	0.3	e.0 0.9	0.0	0.9	0.0		e.0	0.3	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.3	. e.	0.0	0.5	0.0	0.5	0 0	0.0	7.7 0.0
7126 7126 7126 7126 399	0000	300	21	50 50 50	20	20	212	20	30 70 70	20	20	20	188	20	21	70	21	500	240	20	200	26 26	26	7 7 7 8	7 7 8 7 8	26	7 7 8 7 8	26	20	20	207	21	20	8 1	8 K	61	6 H	16	18 18
110 111 113 114	116 118	20 21 21	22	24 25	26 27	28	30,	32	33 34	35	37	38	4.0	4 T	43	4 4	46	84.	50	51	53	5.4 5.5	200	58	20	61	63	64	99	67	60	77	72	74	75	77	78	800	81 82
	0000				υ					O	υ			υ	O		o c		υ					ပ ပ							υ				U				υυ

0.00e++00 0.00e++00 0.00e++00 0.00e++00 0.00e++00

(G6372A) gene

(C6434T) gene. (G6536A) gene. (C6485T) gene. (C6322T) gene. (G5757A) gene.

ced-3 ced-3 ced-3 ced-3 ced-3

T38196 Q54401 Q54666 Q64741 Q64742 Q64744 Q64744

7653 24 7653 9 7653 9 7653 9 7653 9 7653 9

7622 7405 7219 7126 7126 7126 7126 7126

99.6 96.8 94.3 93.1

Pred. No.

Nematode Ced-3 gene.

ced-3 gene.

Description

% Query Match Length DB

Score

Result No.

.21e+	7.21e+01 7.21e+01	.21e+	212	.97e+	.21	.21e+	.21e+	2.5	210+	N	7	C) C	10	10	7	0	C) (	7.5	7 (	4,0		7.2	1.9	7.2	7.2]	2.5	7 (	7.23	7.21	7.21	7.21	7.21	7.21	7.21e+01	2.7	:	7.21	12.7		1.97	7.21e+01	7.6	7.21e+01	. 21	1.9/e+01 1.97e+01	. 21	.21e+	.21e+	. 21e+ . 97e+	υ	.21e+	.21e+	.21e+01	21	. 21	1.97e+01 7.21e+01
quence from	(dG-dT)n pol quence from of a microsa	of a microsa	quence from quence from	llite sequen	llite sequen	of a microsa	quence from	quence irom	quence from	quence from	llite sequen	lite sequen	lite sequen	llite sequen	llite sequen	fuence from	quence from	lite sequen	lite sequen	otide clamp	duence from	quence from	of a microsa	lite sequen	lite sequen	lite sequen	lite sequen	of a microsa	lite sequen	lite sequen	lite sequen	lite sequen	lite sequen	Microsatellite sequen	dG-dT)n pol	uence from	mosomal rep	lite segmen	lite sequen	uence from	uence from	uence irom	lite sequen	uen.	SIM TOT	pol	ence from	G-dT)n pol	ite sequen	a microsa	e from	ntibod	e trom	from	from '	uenbe
Repeat se	(dC-dA)n.(dG-dT)n Repeat sequence f Sequence of a mic	Sequence	Repeat se Repeat se	Microsate	Microsate	Sequence	Repeat se	Repeat sec	Repeat sec	Repeat sec	Microsate	Microsate	Microsate	Microsate]	Microsate	Repeat sec	Repeat sec	Microsate	Microsatel	Oligonucle	Repeat sec	Repeat sec	Sequence	Microsatel	Microsatel	Microsatel	Microsatel	Sednence o	Microsatel	Microsatel	Microsatel	Microsatel	Microsatel	Microsatel	(dC-dA)n.(	Repeat seq	Human chro	Microsatel	Microsatel	Repeat seq	Repeat seg	Microsate]	Microsatel	Microsatel	Repeat sequence fi	(dC-dA)n. (c	Repeat seque	(dC-dA)n.(di Peneat segui	בנו	Sequence of	Repeat sequ	Anti-CD23 6	Repeat sequenc	Repeat sequ	Repeat segu	Microsatellite so Microsatellite so
T65752	T65790 T65790 O34149	034119	T65770 T65705	033731	033944	034097	T65742	T65748	T65722	T65772	033924	Q33873	933776	033734	033692	T65747	165/11	033713	034021	083935	T65720	T65784	034107	033828	033882	033953	033974	034152	034068	033808	0333900	034184	033710	034041 034178	T66048	T65750	768850	033767	033894	T65714	T65775	033737	033807	033825	T65743	T66054	T65736	T65725	033618	034091	T65782	V33319	T65745	T65783	T65710	Q33801
32 29	32 29 32 29 5	32 5	33 29	33	330	33 5	34 29	34 29	34 29	34 29	24 7	34	34 5	34 5	34 5	30	3.7 7.9 3.5 7.5	3 2	30.00	36 14	36 29	36 29	36 5	36	36	9 60	36 5	36 5	36	2. V.	37 5	37 5	37 5	37 5	38 29	38 29	38 TO	38 2	38 5	39 29	39 29	30 62	39	3.5	40 29	40 29	40 29	40 29	40 5	40 5	41 29	41 49	41 29	41 29	41 29	41 5
0.0	900	0.5	00.	0.0	. 7.	0.5	7 7	0.5	0.2	0.0	7.0	. 0	0.5	0.5	2.0	7.0	200	7.7	0.5	0.2	0.5	0.5	0.5	0.0	2.0	7.7	0.2	0.5	2.0	7.0	0.2	0.0	7.0	7.7	0.3	0.0	7.0	0.5	0.2	0.0	7.0	0.5	0.5	7.0	0.0	0.5	2.0	7.7	0.5	0.5	0.0	7.0	7 7	0.2	0.5	
18	188	18	118	19	18	9 5	18	18	18	8 6	2 4	18	18	18	χ α Τ	ρ α -	18	18	18	18	18	18	13	B C	ρα-	18	18	18	ο c	10	18	18	Ω α	18	18	18	9 6	18	18	616	9 6	119	198	9 6	119	18	2 F2	18	13	18	20 0	D C	1 1	18	æ σ -	18
156	158 c 159	c 160			c 165		168	169	170				c 175			179		c 181		183	184										c 196				201	202	203	c 205		207	208		c 211		214	215	217	218	c 219		727	223	224	225		c 228
												_				_					_		_								-							_		_						•				_						
01	01	7.0	100	7.0	01	3.5	01	01	Į,	1.5	01	01	01	7.5	1.0	11	11	)1	)1	Ξ;	7.5	<b>.</b>	1.5	1.		11	<b>.</b>	<b>=</b> =	. <del></del>	Ţ	<u> </u>		· ·	-	<b></b> .			н,		F		п,	٦.		н.			1			4		_			
2.2	7.21	7.7	7.7	2.5	7.7	2.5	7.2	7.2	7.6	7.2	7.21	7.21	7.21		7.21	7.21	7.21	7.21e+0	7.21e+0	7.21	7.61		7 210+	7.27	7.21	7.23	22	7 5	21	2	7.21e+01	7 6	. 5	7.21e+01	Ξ.	7 7	12	$\Xi$	7.5	7 -		$\square$	7 5	Ξ.		7 -	-	н.	-	٦.	1 [	. ~	7.21e+01	<b>⊣</b> -	1e+	1e+
sequen 7.2 sequen 7.2	nicrosa 7.2 which 7.2	from 7.2	equen 7.2	from 7.2	lamp 7.2	equen 1.9	guen 7.2	guen 7.2]	guen 7.21	quen 7.21	ound 7.21	duen 7.21	quen 7.21	4quen 7.21	rosa 7.21	quen 7.21	guen 7.21	equen 7.21	duen 7.21e+0	rom 7.21	sequen 7.21	sequen 7.21	segmen 7.21e+	7.2]	7.21	7.21	7.21	7.21	7.21	7.21	7.21	7.6	7.21	7.21	7.21	7.21	7.21	7.21	7.21	quen 7.21	quen 7.21	quen 7.21	quen 7.21 rosa 7.21	rom 7.21	lamp 7.21	guen 7.21	quen 7.21	guen 7.21	equen 7.21	TOWN 7.21	rom 7.21	rom 7.21	rom 7.21	eguen 7.21	equen 7.21e+	equen 7.21e+
lite sequen 7.2	f a microsa 7.2 otide which 7.2	uence from 7.2	Ilite sequen 7.2	sequence from 7.2	ucleotide clamp 7.2	satellite sequen 7.23	satellite sequen 7.21	satellite sequen 7.21	satellite sequen 7.2	satellite sequen 7.21	sequence found 7.21	satellite sequen 7.21	Satellite sequen 7.21	saceilice sequen 7.21 Sequence found 7.21	ice of a microsa 7.21	satellite sequen 7.21	atellite sequen 7.21	equen 7.21	duen 7.21e+0	rom 7.21	sequen 7.21	sequen 7.21	segmen 7.21e+	7.2]	7.21	7.21	7.21	7.21	7.21	7.21	7.21	7.6	7.21	7.21	7.21	7.21	7.21	7.21	7.21	quen 7.21	quen 7.21	quen 7.21	quen 7.21 rosa 7.21	rom 7.21	lamp 7.21	guen 7.21	quen 7.21	guen 7.21	equen 7.21	TOWN 7.21	rom 7.21	rom 7.21	rom 7.21	tellite seguen 7.21	tellite sequen 7.21e+	tellite sequen 7.21e+
lite sequen 7.2	nicrosa 7.2 which 7.2	uence from 7.2	7.7	sequence from 7.2	7.7	satellite sequen 7.23	guen 7.2	satellite sequen 7.21	satellite sequen 7.2	satellite sequen 7.21	sequence found 7.21	satellite sequen 7.21	Satellite sequen 7.21	saceilice sequen 7.21 Sequence found 7.21	ice of a microsa 7.21	satellite sequen 7.21	atellite sequen 7.21	rosatellite sequen 7.21	rosatellite sequen 7.21e+0	rom 7.21	rosatellite sequen 7.21	crosatellite sequen 7 21	crosatellite segmen 7 216+	7.2]	7.21	7.21	7.21	7.21	7.21	7.21	7.21	7.6	7.21	7.21	7.21	7.21	7.21	7.21	7.21	quen 7.21	quen 7.21	quen 7.21	quen 7.21 rosa 7.21	rom 7.21	lamp 7.21	guen 7.21	quen 7.21	guen 7.21	7.21	TOWN 7.21	rom 7.21	rom 7.21	rom 7.21	eille sequen 7.21 Plite sequen 7.21	crosatellite sequen 7.21e+	ite sequen 7.21e+
Microsatellite sequen 7.2 Microsatellite sequen 7.2	Sequence of a microsa 7.2 Oligonucleotide which 7.2 Drimon for Section 1.2	Repeat sequence from 7.2.	Microsatellite sequen 7.2	Repeat sequence from 7.2	Oligonucleotide clamp 7.27	Microsatellite sequen 7.23	Microsatellite sequen 7.21	Microsatellite sequen 7.21	Microsatellite seguen /.Z	Microsatellite sequen 7.21	Repeat sequence found 7.21	Microsatellite sequen 7.21	Microsatellite sequen 7.21	Repeat Sequence found 7 21	Sequence of a microsa 7.21	Microsatellite sequen 7.21	Microsatellite sequen 7.21	Microsatellite sequen 7.21	Microsatellite sequen 7.21e+0	Migrocatellite grant 7.21	Microsatellite sequen 7.21	Microsatellite sequen 7 21	Microsatellite segmen 7 210+	Microsatellite sequen 7.2]	Microsatellite sequen 7.21	Target sequence #8. 7.21	Microsatellite sequen 7.21	Microsatellite segmen 7 21	Microsatellite sequen 7.21	Spinocerebellar ataxi 7.21	Repeat Sequence from 7.21 Oligonucleotide clamp 7.31	Microsatellite sequen 1 97	Microsatellite sequen 7.21	Microsatellite sequen 7.21	Spinocerebellar ataxi 7.21	Microsatellite sequen 7.21	Microsatellite sequen 7.21	Microsatellite sequen 7.21	Microsatellite segment 7.21	Microsatellite sequen 7.21	Microsatellite sequen 7.21	Microsatellite sequen 7.21	Sequence of a microsa 7.21	Repeat sequence from 7.21	Oligonucleotide clamp 7.21 Repeat sequence from 7.31	Microsatellite sequen 7.21	Microsatellite sequen 7.21	Microsatellite sequen 7.21	Microsatellite sequen 7.21 Repeat sequence from 7.31	Microsatellite sequen 7.21	Repeat sequence from 7.21	Repeat sequence from 7.21	Repeat sequence from 7.21	Microsatellite sequen 7.21	Microsatellite sequen 7.21e+	Microsatellite sequen 7.21e+
033816 Microsatellite sequen 7.2 033672 Microsatellite sequen 7.2	034170 Sequence of a microsa 7.2 V06824 Oligonicleotide which 7.2 040455 brimen for action 44157	T65738 Repeat sequence from 7.2.	Q33891 Microsatellite sequen 7.2 Q33879 Microsatellite sequen 7.2	T65727 Repeat sequence from 7.2	Q83952 Oligonucleotide clamp 7.27	034038 Microsatellite sequen 7.23	033675 Microsatellite sequen 7.23	U33810 Microsatellite sequen 7.21	033991 Microsatellite sequen /.2	Q33888 Microsatellite sequen 7.21	T66105 Repeat sequence found 7.21	033773 Microsatellite sequen 7.21	033885 Microsatellite sequen 7.21	T66096 Repeat Sequence found 7 21	Q34158 Sequence of a microsa 7.21	033707 Microsatellite sequen 7.21	034024 Microsatellite sequen 7.21	033986 Microsatellite sequen 7.21	033909 Microsatellite sequen 7.21e+0	033861 Migracatollite comm 7.21	Q33918 Microsatellite sequen 7.21	033962 Microsatellite seguen 7 21	033642 Microsatellite segmen 7 21e+	033704 Microsatellite sequen 7.21	033684 Microsatellite sequen 7.21	044016 Target sequence #8. 7.21	O47179 MHC DP A intron hinds 7 21	Q34083 Microsatellite segmen 7 21	Q33831 Microsatellite sequen 7.21	095132 Spinocerebellar ataxi 7.21	199733 Repeat Sequence from 7.21 Q83951 Oligonucleotide clamm 7.21	034077 Microsatellite seguen 1 97	034181 Microsatellite sequen 7.21	033678 Microsatellite sequen 7.21	V231129 Spinocerebellar ataxi 7.21 034143 Sequence of a mismosa 7.31	Q33804 Microsatellite sequen 7.21	034044 Microsatellite sequen 7.21	U34U12 Microsatellite sequen 7.21	033933 Microsatellite common 7.21	033645 Microsatellite sequen 7.21	034000 Microsatellite sequen 7.21	034035 Microsatellite sequen 7.21	234161 Sequence of a microsa 7.21	T65712 Repeat sequence from 7.21	V83953 Oligonucleotide clamp 7.21 T65760 Repeat sequence from 7.31	033977 Microsatellite sequen 7.21	Q33687 Microsatellite sequen 7.21	033846 Microsatellite sequen 7.21	V33936 Microsatellite sequen 7.21 T65789 Repeat sequence from 7.31	Q33965 Microsatellite sequen 7.21	T65753 Repeat sequence from 7.21	T65765 Repeat sequence from 7.21	T65759 Repeat sequence from 7.21	033822 Microsatellite seguen 7.21	033657 Microsatellite sequen 7.21e+	Q34047 Microsatellite seguen 7.21e+
5 033816 Microsatellite sequen 7.2 5 033672 Microsatellite sequen 7.2	Sequence of a microsa 7.2 Oligonucleotide which 7.2 Drimon for Section 1.2	29 T65738 Repeat sequence from 7.2.	5 Q33891 Microsatellite sequen 7.2 5 Q33879 Microsatellite sequen 7.2	29 T65727 Repeat sequence from 7.2	14 Q83952 Oligonucleotide clamp 7.27	5 Q34038 Microsatellite sequen 7.23	5 033675 Microsatellite sequen 7.23	5 034080 Microsatellite sequen 7.21	5 033991 Microsatellite sequen 7.2	5 Q33888 Microsatellite seguen 7.21	29 T66105 Repeat sequence found 7.21	5 033773 Microsatellite sequen 7.21	5 033885 Microsatellite sequen 7.21	29 T66096 Repeat Sequence found 7 21	5 034158 Sequence of a microsa 7.21	5 033707 Microsatellite sequen 7.21	5 Q34024 Microsatellite sequen 7.21	5 033986 Microsatellite sequen 7.21	O 033909 Microsatellite sequen 7.21e+0	5 033861 Migrocatollite common 7.21	5 Q33918 Microsatellite sequen 7.21	5 033962 Microsatellite sequen 7 21	5 Q33642 Microsatellite segmen 7 21e+	5 Q33704 Microsatellite sequen 7.21	5 033684 Microsatellite sequen 7.21	7.21 7.21 Target sequence #8. 7.21	7 047179 MHC DR a introm binds 7.21	5 Q34083 Microsatellite segmen 7 21	5 Q33831 Microsatellite sequen 7.21	14 095132 Spinocerebellar ataxi 7.21	199753 Repeat Sequence from 7.21	5 034077 Microsatellite segmen 1 97	5 034181 Microsatellite sequen 7.21	5 033678 Microsatellite sequen 7.21	5 034143 Semence of a microsoft 7.21	5 Q33804 Microsatellite sequen 7.21	5 Q34044 Microsatellite sequen 7.21	9 US4012 Microsatellite sequen 7.21	5 033933 Microsatellite segment 7.21	5 Q33645 Microsatellite sequen 7.21	4 Q34000 Microsatellite sequen 7.21	5 034027 Microsatellite sequen 7.21	5 Q34161 Sequence of a microsa 7.21	9 T65712 Repeat sequence from 7.21	4 V83933 Oligonucleotide clamp 7.21 9 T65760 Repeat sequence from 7.31	5 Q33977 Microsatellite sequen 7.21	5 Q33687 Microsatellite sequen 7,21	5 033846 Microsatellite sequen 7.21	9 V33936 Microsatellite sequen 7.21 9 T65789 Repeat sequence from 7.31	5 Q33965 Microsatellite sequen 7.21	9 T65753 Repeat sequence from 7.21	9 T65765 Repeat sequence from 7.21	9 T65759 Repeat sequence from 7.21	5 Q33822 Microsatellite sequen 7.21	5 Q33657 Microsatellite sequen 7.21e+	5 Q34047 Microsatellite sequen 7.21e+
0.2 20 5 Q33816 Microsatellite sequen 7.2 20 5 Q33672 Microsatellite sequen 7.2.	0.2 20 41 V06824 Oligonucleotide 7.2. 0.2 20 41 V06824 Oligonucleotide which 7.2. 0.2 20 9 Odd455 Drimor for first	0.2 21 29 T65738 Repeat sequence from 7.2.	0.2 21 5 Q33891 Microsatellite sequen 7.2 0.2 21 5 Q33879 Microsatellite sequen 7.3	0.2 22 29 T65727 Repeat sequence from 7.2	0.2 22 5 033716 Wignerleotide clamp 7.2.	0.2 22 5 034038 Microsatellite sequen 7.23	0.2 22 5 033675 Microsatellite sequen 7.23	0.2 22 5 034080 Microsatellite sequen 7.21	0.2 22 5 033991 Microsatellite sequen 7.2	0.2 22 5 Q33888 Microsatellite seguen 7.21	0.2 23 29 T66105 Repeat sequence found 7.21	0.2 23 5 033773 Microsatellite sequen 7.21	0.2 23 5 033885 Microsatellite sequen 7.21	0.2 24 29 T66096 Repeat Sequence found 7 21	0.2 24 5 034158 Sequence of a microsa 7.21	0.2 24 5 033707 Microsatellite sequen 7.21	0.2 24 5 Q34024 Microsatellite seguen 7.21	0.2 24 5 Q33986 Microsatellite seguen 7.21	0.2 24 3 Q33909 Microsatellite sequen 7.21e+0	0.2 25 5 033861 Migrocatollite comm 7.21	0.2 25 5 Q33918 Microsatellite sequen 7.21	0.2 25 5 033962 Microsatellite seguen 7 21	0.2 25 5 Q33642 Microsatellite seguen 7 210+	0.2 26 5 Q33704 Microsatellite sequen 7.21	0.2 26 5 033684 Microsatellite sequen 7.21	0.2 26 7 044016 Target sequence #8. 7.21	0.2 26 7 047179 MHC DR A intron hind: 7.21	0.2 26 5 Q34083 Microsatellite segmen 7 21	0.2 26 5 Q33831 Microsatellite sequen 7.21	0.2 2/ 14 095132 Spinocerebellar ataxi 7.21	0.2 27 14 Q83951 Oligonucleotide clamp 7.21	0.2 27 5 034077 Microsatellite segmen 1 97	0.2 27 5 034181 Microsatellite sequen 7.21	0.2 27 5 033678 Microsatellite sequen 7.21	0.2 27 5 034143 Segmence of a micros 7.21	0.2 27 5 Q33804 Microsatellite sequen 7.21	0.2 27 5 034044 Microsatellite sequen 7.21	0.2 28 29 T66102 Bornet Comment 5.21	0.2 28 5 033933 Microsatellite segmen 7 21	0.2 28 5 Q33645 Microsatellite sequen 7.21	0.2 28 4 Q34000 Microsatellite sequen 7.21	0.2 28 5 034037 Microsatellite sequen 7.21	0.2 28 5 Q34161 Sequence of a microsa 7.21	0.2 29 29 T65712 Repeat sequence from 7.21	0.2 29 29 T65760 Repeat sequence from 7.21	0.2 29 5 033977 Microsatellite sequen 7.21	0.2 29 5 033687 Microsatellite sequen 7.21	0.2 29 5 Q33846 Microsatellite sequen 7.21	0.2 30 29 T65789 Repeat segmen 7.21	0.2 30 5 Q33965 Microsatellite sequen 7 21	0.2 31 29 T65753 Repeat sequence from 7.21	0.2 31 29 T65765 Repeat sequence from 7.21	0.2 31 29 T65759 Repeat sequence from 7.21	0.2 31 5 Q33822 Microsatellite seguen 7 21	0.2 31 5 Q33657 Microsatellite sequen 7.21e+	0.2 31 5 Q34047 Microsatellite seguen 7.21e+
18 0.2 20 5 033816 Microsatellite sequen 7.2 20 5 033672 Microsatellite sequen 7.2	10 0.2 20 4170 Sequence of a microsa 7.2 18 0.2 20 41 V06824 Oligonous/cocideotide 7.2 18 0.2 20 9 049455 Primor for Addition 18	18 0.2 21 29 T65738 Repeat sequence from 7.2.	18 0.2 21 5 033891 Microsatellite sequen 7.2 18 0.2 21 5 033879 Microsatellite seguen 7.2	18 0.2 22 29 T65727 Repeat sequence from 7.2.	19 0.2 22 5 033716 Wichosphitts Clamp 7.2.	18 0.2 22 5 034038 Microsatellite sequen 7.23	18 0.2 22 5 033675 Microsatellite seguen 7.23	18 0.2 22 5 034080 Microsatellite sequen 7.21	18 0.2 22 5 033991 Microsatellite sequen / .2.	18 0.2 22 5 Q33888 Microsatellite sequen 7.21	18 0.2 23 29 T66105 Repeat sequence found 7.21	18 0 2 23 5 033773 Microsatellite sequen 7.21	18 0.2 23 5 033885 Microsatellite sequen 7.21	18 0.2 24 29 T66096 Repeat Segmence found 7 21	18 0.2 24 5 Q34158 Sequence of a microsa 7.21	18 0.2 24 5 033707 Microsatellite sequen 7.21	18 0.2 24 5 034024 Microsatellite sequen 7.21	18 0.2 24 5 Q33986 Microsatellite sequen 7.21	18 0.2 25.20 mc5724 Microsatellite sequen 7.21e+0	18 0.2 25 5 033861 Microcatollite control	18 0.2 25 5 Q33918 Microsatellite sequen 7 21	18 0.2 25 5 033962 Microsatellite seguen 7 21	18 0.2 25 5 Q33642 Microsatellite seguen 7 210+	18 0.2 26 5 Q33704 Microsatellite sequen 7.21	18 0.2 26 5 033684 Microsatellite sequen 7.21	18 0.2 26 7 044016 Target sequence #8. 7.21	18 0.2 26 7 047179 MHC DP a intron hinds 7.21	18 0.2 26 5 Q34083 Microsatellite segmen 7 21	18 0.2 26 5 Q33831 Microsatellite sequen 7.21	18 0.2 2/ 14 Q95132 Spinocerebellar ataxi 7.21	18 0.2 27 14 Q83951 Oligonucleotide clamp 7.21	19 0.2 27 5 Q34077 Microsatellite segmen 1 97	18 0.2 27 5 034181 Microsatellite sequen 7.21	18 0.2 27 5 033678 Microsatellite sequen 7.21	18 0.2 27 5 034143 Sequence of a micross 7.21	18 0.2 27 5 Q33804 Microsatellite sequen 7.21	18 0.2 27 5 Q34044 Microsatellite sequen 7.21	18 0.2 28 29 T6K102 Boxest former 7.21	18 0.2 28 5 033933 Microsatellite social 7 21	18 0.2 28 5 Q33645 Microsatellite sequen 7.21	18 0.2 28 4 Q34000 Microsatellite sequen 7.21	18 0.2 28 5 034037 Microsatellite sequen 7.21	18 0.2 28 5 034161 Sequence of a microsa 7.21	18 0.2 29 29 T65712 Repeat sequence from 7.21	18 0.2 29 29 T65760 Repeat segmence from 7 21	18 0.2 29 5 033977 Microsatellite sequen 7.21	18 0.2 29 5 Q33687 Microsatellite sequen 7.21	18 0.2 29 5 Q33846 Microsatellite sequen 7.21	18 0.2 30 29 T65789 Repeat sequen 7.21	18 0.2 30 5 Q33965 Microsatellite seguen 7.21	18 0.2 31 29 T65753 Repeat sequence from 7.21	18 0.2 31.29 T65765 Repeat sequence from 7.21	18 0.2 31 29 T65759 Repeat sequence from 7.21	18 0.2 31 5 033822 Microsatellite sequen 7 21	18 0.2 31 5 Q33657 Microsatellite sequen 7.21e+	18 0.2 31 5 Q34O47 Microsatellite sequen 7.2le+
8 0.2 20 5 Q33816 Microsatellite sequen 7.2 8 0.2 20 5 Q33672 Microsatellite sequen 7.2	10 0.2 20 4170 Sequence of a microsa 7.2 18 0.2 20 41 V06824 Oligonous/cocideotide 7.2 18 0.2 20 9 049455 Primor for Addition 18	18 0.2 21 29 T65738 Repeat sequence from 7.2.	18 0.2 21 5 033891 Microsatellite sequen 7.2 18 0.2 21 5 033879 Microsatellite seguen 7.2	18 0.2 22 29 T65727 Repeat sequence from 7.2.	19 0.2 22 5 033716 Wichosphitts Clamp 7.2.	18 0.2 22 5 034038 Microsatellite sequen 7.23	18 0.2 22 5 033675 Microsatellite seguen 7.23	18 0.2 22 5 034080 Microsatellite sequen 7.21	18 0.2 22 5 033991 Microsatellite sequen / .2.	18 0.2 22 5 Q33888 Microsatellite sequen 7.21	18 0.2 23 29 T66105 Repeat sequence found 7.21	18 0 2 23 5 033773 Microsatellite sequen 7.21	18 0.2 23 5 033885 Microsatellite sequen 7.21	18 0.2 24 29 T66096 Repeat Segmence found 7 21	18 0.2 24 5 Q34158 Sequence of a microsa 7.21	18 0.2 24 5 033707 Microsatellite sequen 7.21	18 0.2 24 5 034024 Microsatellite sequen 7.21	18 0.2 24 5 Q33986 Microsatellite sequen 7.21	18 0.2 25.20 mc5724 Microsatellite sequen 7.21e+0	18 0.2 25 5 033861 Microcatollite control	18 0.2 25 5 Q33918 Microsatellite sequen 7 21	18 0.2 25 5 033962 Microsatellite seguen 7 21	18 0.2 25 5 Q33642 Microsatellite seguen 7 210+	18 0.2 26 5 Q33704 Microsatellite sequen 7.21	18 0.2 26 5 033684 Microsatellite sequen 7.21	18 0.2 26 7 044016 Target sequence #8. 7.21	18 0.2 26 7 047179 MHC DP a intron hinds 7.21	18 0.2 26 5 Q34083 Microsatellite segmen 7 21	18 0.2 26 5 Q33831 Microsatellite sequen 7.21	18 0.2 2/ 14 Q95132 Spinocerebellar ataxi 7.21	18 0.2 27 14 Q83951 Oligonucleotide clamp 7.21	19 0.2 27 5 Q34077 Microsatellite segmen 1 97	18 0.2 27 5 034181 Microsatellite sequen 7.21	18 0.2 27 5 033678 Microsatellite sequen 7.21	18 0.2 27 5 034143 Sequence of a micross 7.21	18 0.2 27 5 Q33804 Microsatellite sequen 7.21	18 0.2 27 5 Q34044 Microsatellite sequen 7.21	18 0.2 28 29 T6K102 Boxest former 7.21	18 0.2 28 5 033933 Microsatellite social 7 21	18 0.2 28 5 Q33645 Microsatellite sequen 7.21	18 0.2 28 4 Q34000 Microsatellite sequen 7.21	18 0.2 28 5 034037 Microsatellite sequen 7.21	18 0.2 28 5 034161 Sequence of a microsa 7.21	18 0.2 29 29 T65712 Repeat sequence from 7.21	18 0.2 29 29 T65760 Repeat segmence from 7 21	18 0.2 29 5 033977 Microsatellite sequen 7.21	18 0.2 29 5 Q33687 Microsatellite sequen 7.21	18 0.2 29 5 Q33846 Microsatellite sequen 7.21	18 0.2 30 29 T65789 Repeat sequen 7.21	18 0.2 30 5 Q33965 Microsatellite seguen 7.21	18 0.2 31 29 T65753 Repeat sequence from 7.21	18 0.2 31.29 T65765 Repeat sequence from 7.21	18 0.2 31 29 T65759 Repeat sequence from 7.21	18 0.2 31 5 033822 Microsatellite sequen 7 21	18 0.2 31 5 Q33657 Microsatellite sequen 7.21e+	18 0.2 31 5 Q34O47 Microsatellite sequen 7.2le+

0000(

ουου ο

.rng
0
$\vdash$
1
∞
Ä
ŀ
σ
ö
ō
ĭ
~
ø
O.
1
ø
0
7
'n
ns
ט

97e+ 97e+ 21e+ 21e+ 21e+ 21e+ 21e+ 21e+ 21e+ 21	222222222	2.21e+01 2.21e+01 2.21e+01 9.7e+01 9.7e+01 9.7e+01 2.21e+01 2.21e+01 2.21e+01	221221221221221221221221221221221221221	7.21e+01 7.21e+01 7.21e+01 1.97e+01 1.97e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01	21e+ 21e+ 21e+ 21e+ 21e+ 21e+ 21e+ 21e+
te sequen te sequen te sequen te sequen te sequen ne from ence from ence from ence from ence from ence from ence from ence from	crosa sequen crosa from lynuc olynuc sequen	Repeat sequence Irom Microsatellite sequen Microsatellite sequen Poly GT enhancer elem Microsatellite sequen Microsatellite sequen Microsatellite sequen Microsatellite sequen Microsatellite sequen Microsatellite sequen Microsatellite sequen Microsatellite sequen Microsatellite sequen Microsatellite sequen Microsatellite sequen Microsatellite sequen	equence from equence from equence from of a microsa of a microsa ellite sequence from ellite sequence from ellite sequence signature ellite sequence signature ellite sequence ellite sequence ellite sequence ellite sequen	ite sequen ite sequen ite sequen ence from ence from ence from ence from in microsate ite sequen ite sequen off or primer ito DNA tem cometric an	cometric and ite marker lite sequentite sequ
Microse Microse Microse Microse Microse Repeat Repeat Repeat Repeat					Mass Microsi Microsi Microsi Microsi Microsi Surviv Mouse EST cle Bovine Polymo Bovine Bovine Mouse Bovine Mouse Bovine
Q33548 Q33603 Q334056 Q33813 Q33654 Q33654 T65728 T65792 T65739	Q34116 Q33858 Q33755 Q34173 T65762 Q54430 T69881 Q33930	165766 1634059 1633704 0033823 033594 033580 165724	165730 765730 765767 765767 7384155 9384155 933600 933600 933651 933636 933636 933636 933636 933636 933636 933636 933636 933636 933636 933636 933636 933636 933636 933636	16657 0333652 1465740 1465740 033850 033852 0033852 0033852 0033852 0033852 0033852 0033852 0033852 0033852 0033852	V395867 V395867 V16155 V16155 V181266 V18867 V28950 V28950 V28957 V28957 V28957 V28957 V28957
50 50 50 50 50 50 50 50 50 50 50 50 50 5	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	611 29 601 29 601 29 60 60 60 60 60 60 60 60 60 60 60 60 60	60 60 60 60 60 60 60 60 60 60 60 60 60 6	885 29 885 29 91 29 92 29 29 92 29 92 29 93 29 94 29 95 29 96 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 29 97 20 97 br>97 20 97 2	135 9 4 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
0000000000	000000000	0000000000	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	900000000000000000000000000000000000000	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
делеелее		, , , , , , , , , , , , , , , , , , , ,			
	c 313 c 314 c 315 c 316 317 318 c 320 c 320	0 0 3328 3224 0 0 3224 0 0 3224 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000 00 000 000 000 000 000 000 000 000		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01	221e+ 221e+ 221e+ 221e+ 221e+ 21e+	12.77.21.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	ユアユアアアアアアア	444444444444444444444444444444444444444
clamp 7.21e+ from 7.21e+ from 7.21e+ from 7.21e+ from 7.21e+ from 7.21e+ from 7.21e+ from 7.21e+ from 7.21e+ from 7.21e+ from 7.21e+ from 7.21e+		12.77.21.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		7.27 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 1.99 rrom 1.99 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 r
c clamp 7.21e+ e from 7.21e+ e from 7.21e+ e from 7.21e+ e from 7.21e+ e from 7.21e+ sequen 7.21e+ sequen 7.21e+ d to am 1.21e+ d to am 1.21e+	e from 7.21 e from 7.21 e from 7.21 sequen 7.21 sequen 7.21 microsa 7.21 microsa 7.21 e from 7.21	12.77.21.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		7.27 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 1.99 rrom 1.99 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 rrom 7.22 r
clamp 7.21e+ from 7.21e+ from 7.21e+ from 7.21e+ from 7.21e+ from 7.21e+ from 7.21e+ from 7.21e+ from 7.21e+ from 7.21e+ from 7.21e+ from 7.21e+	e from 7.21 e from 7.21 e from 7.21 sequen 7.21 sequen 7.21 microsa 7.21 microsa 7.21 e from 7.21	12.77.21.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974.1.974	22222222222		sequence from 7.23 sequence from 7.23 sequence from 7.25 frellite sequen 1.99 from 7.25 sequence from 7.22 sequence from 7.22 sequence from 7.23 sequence from 7.23 sequence from 7.23 sequence from 7.24 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 sequence from 7.25 s
Oligonucleotide clamp 7.21e+ Repeat sequence from 7.21e+ Repeat sequence from 7.21e+ Repeat sequence from 7.21e+ Repeat sequence from 7.21e+ Repeat sequence from 7.21e+ Microsatellite sequen 7.21e+ Repeat sequence from 7.21e+ Repeat sequence from 7.21e+ Repeat sequence from 7.21e+ PGR primer used to am 1.97e+ Microsatellite sequen 7.21e+	Repeat Sequence from 7.21 Repeat Sequence from 7.21 Repeat Sequence from 7.21 Microsatellite Sequen 7.23 Microsatellite Sequen 7.21 Sequence of a microsa 7.21 Sequence of a microsa 7.21 Repeat Sequence from 1.97 Repeat Sequence from 7.21	Repeat sequence from 7.21 Sequence of a microsa 1.97 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Repeat sequence from 1.97 Oligonucleotide 1 use 7.21 Repeat sequence from 7.21 Repeat sequence from 7.21 Repeat sequence from 7.21 Nicrosatellite sequen 7.21 Oligonucleotide 2 use 7.21	Microsatellite sequen 1.21 (dC-dA)n.(dG-dT)n pol 1.21 (dC-dA)n.(dG-dT)n pol 7.21 Repeat sequence from 7.21 Repeat sequence from 7.21 Repeat sequence from 7.21 Repeat sequence from 7.21 Repeat sequence from 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite 8.21 Microsatellite	Repeat Sequence Iron Sequence of a microsa 197 Repeat sequence from 1.97 Repeat sequence from 7.21 Repeat sequence from 7.21 Repeat sequence from 7.22 Repeat sequence from 7.22 Repeat sequence from 7.22 Repeat sequence from 7.22 Repeat sequence from 7.22 Repeat sequence from 7.22 Repeat sequence from 7.22 Repeat sequence from 7.22 Repeat sequence from 7.22 Repeat sequence from 7.22 Repeat sequence from 7.22 Repeat sequence from 7.22 Repeat sequence from 7.22 Repeat sequence from 7.22 Repeat sequence from 7.22 Repeat sequence from 7.22 Repeat sequence from 7.22 Repeat sequence from 7.22 Repeat sequence from 7.22	Repeat sequence from 7.22 Repeat sequence from 7.22 Repeat sequence from 7.22 Microsatellite sequen 1.99 (dC.dA)n.(dG-dT)n pol 7.22 Repeat sequence from 7.22 Microsatellite sequen 7.22 Microsatellite sequen 7.22 Microsatellite sequen 7.22 Microsatellite sequen 7.27 Microsatellite sequen 7.27 Repeat sequence from 7.27 Repeat sequence from 7.27 Repeat sequence from 7.27 Repeat sequence from 7.27 Repeat sequence from 7.27 Repeat sequence from 7.27
4 083950 Oligonucleotide clamp 7.21e+ 9 765737 Repeat sequence from 7.21e+ 9 765737 Repeat sequence from 7.21e+ 9 765739 Repeat sequence from 7.21e+ 9 765739 Repeat sequence from 7.21e+ 5 033770 Microsatellite sequence 7.21e+ 9 76574 Repeat sequence from 7.21e+ 9 76578 Repeat sequence from 7.21e+ 9 76578 Repeat sequence from 7.21e+ 9 765788 Por Repeat sequence from 7.21e+ 17 97135 Por Repeat sequence from 7.21e+ 17 97135 Por Repeat sequence from 7.21e+ 17 97135 Por Repeat sequence from 7.21e+ 17 97135 Por Repeat sequence from 7.21e+ 17 97135 Por Repeat sequence from 7.21e+ 17 97135 Por Repeat sequence from 7.21e+ 17 97135 Por Repeat sequence from 7.21e+ 17 97135 Por Repeat sequence from 7.21e+ 17 97135 Por Repeat sequence from 7.21e+	9 165761 Repeat sequence from 7.21 (16576) Repeat sequence from 7.21 (16576) Repeat sequence from 7.21 (16576) Repeat sequence from 7.22 (16576) Repeat sequence from 7.22 (16576) Repeat sequence of a microsa 7.22 (16575) Repeat sequence from 7.21 (16575) Repeat sequence from 7.21 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.22 (16575) Repeat sequence from 7.	9 765786 Repeat sequence from 7.21 Squence of a microsa 1.97 Squence of a microsa 1.97 Squence of a microsa 1.97 Squence from 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Repeat sequence from 7.21 Repeat sequence from 7.21 Repeat sequence from 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite sequen 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Microsatellite 2 use 7.21 Micro	2 (33939) Microsatellite sequen 7.21 (36060) (4C-4A)n.(4G-4T)n pol 1.97 (4C-4A)n.(4G-4T)n pol 1.97 (4C-4A)n.(4G-4T)n pol 1.21 (4C-4T)n pol 1.22 (4C-4A)n.(4G-4T)n pol 7.21 (4C-4T)n Repeat sequence from 7.21 (4C-4T)n Repeat sequence from 7.21 (4C-4T)n Repeat sequence from 7.21 (4C-4T)n Repeat sequence from 7.21 (4C-4T)n Repeat sequence from 7.21 (4C-4T)n Repeat sequence from 7.21 (4C-4T)n Microsatellite sequen 7.21 (4C-4T)n Microsatellite sequen 7.21 (4C-4T)n Microsatellite sequen 7.21 (4C-4T)n Microsatellite sequen 7.21 (4C-4T)n Microsatellite sequen 7.21 (4C-4T)n Microsatellite sequen 7.21 (4C-4T)n Microsatellite sequen 7.21 (4C-4T)n Microsatellite sequen 7.21 (4C-4T)n Microsatellite sequen 7.21 (4C-4T)n Microsatellite sequen 7.21 (4C-4T)n Microsatellite sequen 7.21 (4C-4T)n Microsatellite sequen 7.21 (4C-4T)n Microsatellite sequen 7.21 (4C-4T)n Microsatellite sequen 7.21 (4C-4T)n Microsatellite sequen 7.21 (4C-4T)n Microsatellite sequen 7.21 (4C-4T)n Microsatellite sequen 7.21 (4C-4T)n Microsatellite sequen 7.21 (4C-4T)n Microsatellite sequen 7.21 (4C-4T)n Microsatellite sequen 7.21 (4C-4T)n Microsatellite 8C-4T)n Microsatellite 8	2 165772 Repeat Sequence from 1.22 1 180427 Hepatoma AS-30D Type 7.21 180427 Hepatoma AS-30D Type 7.21 14 083954 Repeat sequence from 7.21 29 T65714 Repeat sequence from 7.21 29 T65717 Repeat sequence from 7.21 29 T65716 Repeat sequence from 7.21 29 T65717 Repeat sequence from 7.21 20 T6574 Repeat sequence from 7.21 20 T6574 Repeat sequence from 7.21 21 T6577 Repeat sequence from 7.21 22 T6577 Repeat sequence from 7.21 24 O34003 Microsatellite sequence 7.22 25 T6577 Repeat sequence from 7.22 26 T65777 Repeat sequence from 7.22 27 T65777 Repeat sequence from 7.22 28 T65777 Repeat sequence from 7.22 29 T65777 Repeat sequence from 7.22 29 T65777 Repeat sequence from 7.22 20 T65777 Repeat sequence from 7.22	29         765764         Repeat sequence from 7.2           29         765773         Repeat sequence from 7.2           29         765713         Repeat sequence from 7.2           20         70.34071         Microsatellite sequen 1.9           29         766108         (dc-dA)n. (dc-dT)n pol 7.2           29         76576         Repeat sequence from 7.2           20         76578         Microsatellite sequen 1.9           20         73864         Microsatellite sequen 1.2           20         765735         Repeat sequence from 1.9           20         765707         Repeat sequence from 1.9
42 14 Q83950 Oligonucleotide clamp 7.21e+ 42 29 T65797 Repeat sequence from 7.21e+ 42 29 T65797 Repeat sequence from 7.21e+ 42 29 T65797 Repeat sequence from 7.21e+ 42 29 T65796 Repeat sequence from 7.21e+ 42 29 T6576 Microsatellite sequence 7.21e+ 43 29 T6578 Repeat sequence from 7.21e+ 43 29 T6578 Repeat sequence from 7.21e+ 43 29 T6578 Repeat sequence from 7.21e+ 43 37 T97135 PCR Primer used to am 1.97e+ 43 43 37 T97135 Microsatellite sequen 7.21e+	4.3 4 29 765761 Repeat sequence from 7.21 44.29 765749 Repeat sequence from 7.21 44.5 033636 Microsatellite sequen 7.21 44.5 034104 Sequence of a microsa 7.21 44.5 033983 Microsatellite sequen 7.21 44.5 033983 Repeat sequen 7.21 44.5 034113 Sequence of a microsa 7.21 44.5 034113 Repeat sequence from 7.21 45.29 765751 Repeat sequence from 7.21	45 29 765786 Repeat sequence from 7.21 8 9 034137 Sequence of a microsa 1.97 45 5 033918 Microsatellite sequen 7.21 46 29 765709 Repeat sequence from 7.21 46 29 765756 Repeat sequence from 7.21 46 29 765756 Repeat sequence from 7.21 46 29 765719 Repeat sequence from 7.21 46 56 V83641 Oligonucleotide 2 use 7.21 46 56 V83641 Oligonucleotide 2 use 7.21	46 5 (033939 Microsatellite sequen 7.21 47 29 T66060 (dC-dA)n.(dG-dT)n pol 1.97 47 29 T66060 (dC-dA)n.(dG-dT)n pol 1.22 47 26 T65713 Repeat sequence from 7.21 47 29 T65716 Repeat sequence from 7.21 47 29 T65726 Repeat sequence from 7.21 47 29 T65726 Repeat sequence from 7.21 47 24 T30423 Compound in phase sim 1.97 47 5 (033834 Microsatellite sequen 7.21 47 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (033959 Microsatellite sequen 7.21 48 5 (0339	49 29 165778 Repeat Sequence of a microsa 1.97 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	51 29 T65764 Repeat sequence from 7.22 129 T65713 Repeat sequence from 7.25 129 T65715 Repeat sequence from 7.25 129 T65715 Repeat sequence from 7.25 129 T66009 (dC-dA)n.(dG-dT)n pol 7.25 129 T65108 (dC-dA)n.(dG-dT)n pol 7.25 129 T65768 Repeat sequence from 7.25 129 T65768 Microsatellite sequen 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T65705 Repeat sequence from 7.25 120 T6
0.2 42 14 Q83950 Oligonucleotide clamp 7.21e+ 0.2 42 29 T65778 Repeat sequence from 7.21e+ 0.2 42 29 T65797 Repeat sequence from 7.21e+ 0.2 42 29 T65797 Repeat sequence from 7.21e+ 0.2 42 29 T65779 Repeat sequence from 7.21e+ 0.2 42 29 T65779 Repeat sequence from 7.21e+ 0.2 42 29 T65776 Repeat sequence from 7.21e+ 0.2 43 29 T65784 Repeat sequence from 7.21e+ 0.2 43 29 T65784 Repeat sequence from 7.21e+ 0.3 43 797135 PCR Primer used to am 1.97e+ 0.4 43 4034016 Microsatellite sequen	0.2 44 29 T65761 Repeat sequence from 7.21 0.2 44 29 T65761 Repeat sequence from 7.21 0.2 44 29 T65763 Repeat sequence from 7.21 0.2 44 5 Q33636 Microsatellite sequen 7.21 0.2 44 5 Q34104 Sequence of a microsa 7.21 0.2 44 5 Q34113 Sequence of a microsa 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat Sequence from 7.21 0.2 45 29 T65751 Repeat Sequence from 7.21 0.2 45 29 T65751 Repeat Sequence from 7.21 0.2 45 29 T65751 Repeat Sequence from 7.21 0.2 45 29 T65751 Repeat Sequence from 7.21 0.2 45 29 T65751 Repeat Sequence from 7.21 0.2 45 29 T65751 Repeat Sequence from 7.21 0.2 45 29 T65751 Repeat Sequence from 7.21 0.2 45 29 T65751 Repeat Sequence from 7.21 0.2 45 29 T65751 Repeat Sequence from 7.21 0.2 45 29 T65751 Repeat Sequence from 7.21 0.2 45 29 T65751 Repeat Sequence from 7.21 0.2 45 29 T65751 Repeat Sequence from 7.21 0.2 45 29 T65751 Repeat Sequence from 7.21 0.2 45 29 T65751 Repeat Sequence from 7.21 0.2 45 20 T65751 Repeat Sequence from 7.21 0.2 45 20 T65751 Repeat Sequence from 7.21 0.21 0.2 45 20 T65751 Repeat Sequence from 7.21 0.2 45 20 T65751 Rep	0.2 45 29 765786 Repeat sequence from 7.21 0.2 45 5 034137 Sequence of a microsa 1.97 0.2 45 5 033918 Microsatellite sequen 7.21 0.2 46 29 765709 Repeat sequence from 7.21 0.2 46 29 765709 Repeat sequence from 7.21 0.2 46 29 765756 Repeat sequence from 7.21 0.2 46 29 765719 Repeat sequence from 7.21 0.2 46 5 03641 Oligonucleotide 2 use 7.21 0.2 46 5 03841 Oligonucleotide 2 use 7.21 0.2 46 56 V83641 Oligonucleotide 2 use 7.21 0.2 46 50 V83641 Oligonucleotide 2 use 7.21 0.2 46 50 V83641 Oligonucleotide 2 use 7.21 0.2 46 50 V83641 Oligonucleotide 2 use 7.21 0.2 46 50 V83641 Oligonucleotide 2 use 7.21 0.2 46 50 V83641 Oligonucleotide 2 use 7.21 0.2 46 50 V83641 Oligonucleotide 2 use 7.21 0.2 46 50 V83641 Oligonucleotide 2 use 7.21 0.2 46 50 V83641 Oligonucleotide 2 use 7.21 0.2 46 50 V83641 Oligonucleotide 2 use 7.21 0.2 46 50 V83641 Oligonucleotide 2 use 7.21 0.2 46 50 V83641 Oligonucleotide 2 use 7.21 0.2 46 50 V83641 Oligonucleotide 2 use 7.21 0.2 46 50 V83641 Oligonucleotide 2 use 7.21 0.2 46 50 V83641 Oligonucleotide 2 use 7.21 0.2 46 50 V83641 Oligonucleotide 2 use 7.21 0.2 46 50 V83641 Oligonucleotide 2 use 7.21 0.2 46 50 V83641 Oligonucleotide 2 use 7.21 0.2 46 50 V83641 Oligonucleotide 2 use 7.21 0.2 46 50 V83641 Oligonucleotide 2 use 7.21 0.2 46 50 V83641 Oligonucleotide 2 use 7.21 0.21 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.2 46 0.	0.2 46 5 Q33939 Microsatellite sequen 7.21 0.2 47 29 T66050 (dC-dA)n (dC-dT)n pol 1.97 0.2 47 29 T66060 (dC-dA)n (dG-dT)n pol 7.21 0.2 47 29 T65713 Repeat sequence from 7.21 0.2 47 29 T65716 Repeat sequence from 7.21 0.2 47 29 T65726 Repeat sequence from 7.21 0.2 47 29 T65726 Repeat sequence from 7.21 0.2 47 24 T30423 Compound in phase sim 1.97 0.2 47 5 Q33834 Microsatellite sequen 7.21 0.2 47 5 Q33559 Microsatellite sequen 7.21 0.2 48 5 Q33798 Microsatellite sequen 7.21 0.2 48 5 Q33798 Microsatellite sequen 7.21 0.2 48 5 Q33798 Microsatellite sequen 7.21 0.2 48 5 Q33798 Microsatellite sequen 7.21 0.2 48 5 Q33798 Microsatellite sequen 7.21 0.2 48 5 Q33798 Microsatellite sequen 7.21 0.2 48 5 Q33798 Microsatellite sequen 7.21 0.2 48 5 Q33798 Microsatellite sequen 7.21 0.2 48 5 Q33798 Microsatellite sequen 7.21 0.2 48 5 Q33798 Microsatellite sequen 7.21 0.2 48 5 Q33798 Microsatellite sequen 7.21 0.2 48 5 Q33798 Microsatellite sequen 7.21 0.2 48 5 Q33798 Microsatellite sequen 7.21 0.2 48 5 Q33798 Microsatellite sequen 7.21 0.2 48 5 Q33798 Microsatellite Sequen 7.21 0.2 48 5 Q33798 Microsatellite Sequen 7.21 0.2 48 5 Q33798 Microsatellite Sequen 7.21 0.2 48 5 Q33798 Microsatellite Sequen 7.21 0.2 48 5 Q33798 Microsatellite Sequen 7.21 0.2 48 5 Q33798 Microsatellite Sequen 7.21 0.2 48 5 Q33798 Microsatellite Sequen 7.21 0.2 48 5 Q33798 Microsatellite Sequen 7.21 0.2 48 5 Q33798 Microsatellite Sequen 7.21 0.2 49 0.2 49 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0.2 40 0	0.2 49 29 T65/85 Repeat Sequence of a microsa 1/97 (2) 49 33 T80427 Repeat Sequence of a microsa 1/97 (2) 49 33 T80427 Repeat Sequence from 1/97 (2) 50 29 T65791 Repeat Sequence from 7/21 (2) 50 29 T65774 Repeat Sequence from 7/21 (2) 50 29 T65774 Repeat Sequence from 7/21 (2) 50 29 T65787 Repeat Sequence from 7/21 (2) 50 29 T65787 Repeat Sequence from 7/21 (2) 50 29 T65787 Repeat Sequence from 7/21 (2) 50 29 T65787 Repeat Sequence from 7/21 (2) 50 29 T65787 Repeat Sequence from 7/21 (2) 50 29 T65771 Repeat Sequence from 7/21 (2) 51 29 T65772 Repeat Sequence from 7/21 (2) 51 29 T65773 Repeat Sequence from 7/21 (2) 51 29 T65773 Repeat Sequence from 7/21 (2) 51 29 T65773 Repeat Sequence from 7/21 (2) 51 29 T65775 Repeat Sequence from 7/21 (2) 51 29 T65795 Repeat Sequence from 7/21 (2) 51 29	0.2 51 29 T65764 Repeat sequence from 7.22 0.2 51 29 T65773 Repeat sequence from 7.22 0.2 51 29 T65713 Repeat sequence from 7.22 0.2 52 29 T66709 (dC-dA)n. (dG-dT)n pol 7.22 0.2 52 29 T66708 (dC-dA)n. (dG-dT)n pol 7.22 0.2 54 5 033870 Microsatellite sequen 7.2 0.2 54 11 Q45388 Microsatellite sequen 7.2 0.2 55 5 033864 Microsatellite sequen 7.2 0.2 55 29 T65705 Repeat sequence from 7.2 0.2 56 29 T65705 Repeat sequence from 7.2 0.2 56 29 T65707 Repeat sequence from 1.9 0.2 56 29 T65707 Repeat sequence from 1.9 0.2 56 29 T65707 Repeat sequence from 1.9 0.2 56 29 T65709 Repeat sequence from 1.9 0.2 56 29 T65709 Repeat sequence from 1.9 0.2 56 29 T65709 Repeat sequence from 7.2 0.2 56 29 T65709 Repeat sequence from 7.2 0.2 56 29 T65709 Repeat sequence from 7.2 0.2 56 29 T65709 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 56 29 T65796 Repeat sequence from 7.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0
0.2 42 14 083950 Oligonucleotide clamp 7.21e+ 0.2 42 29 T65778 Repeat sequence from 7.21e+ 0.2 42 29 T65757 Repeat sequence from 7.21e+ 0.2 42 29 T65779 Repeat sequence from 7.21e+ 0.2 42 29 T65776 Repeat sequence from 7.21e+ 0.2 42 29 T65776 Repeat sequence from 7.21e+ 0.2 42 29 T65776 Repeat sequence from 7.21e+ 0.2 43 29 T6578 Repeat sequence from 7.21e+ 0.2 43 29 T65788 Repeat sequence from 7.21e+ 0.2 43 37 T97138 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+ 0.2 43 37 T97136 Repeat sequence from 7.21e+	0.2 44 29 T65761 Repeat sequence from 7.21 0.2 44 29 T65769 Repeat sequence from 7.21 0.2 44 29 T65763 Repeat sequence from 7.21 0.2 44 5 Q33404 Microsatellite sequen 7.21 0.2 44 5 Q34104 Microsatellite sequen 7.21 0.2 44 5 Q34113 Sequence of a microsa 7.21 0.2 44 5 Q3413 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.2 45 29 T65751 Repeat sequence from 7.21 0.21 0.21 0.21 0.21 0.21 0.21 0.21 0	0.2 45 29 T65786 Repeat sequence from 7.21 Squence of a microsa 1.97 Squence of a microsa 1.97 Squence of a microsa 1.97 Squence of a microsa 1.97 Squence 0.2 45 5 033915 Microsatellite sequen 7.21 0.2 46 59 T65709 Repeat sequence from 7.21 0.2 46 29 T65756 Repeat sequence from 7.21 0.2 46 29 T65756 Repeat sequence from 7.21 0.2 46 5 033840 Microsatellite sequen 7.21 0.2 46 56 V83641 Oligonucleotide 2 use 7.21 0.2 46 56 V83641 Oligonucleotide 2 use 7.21 0.2 46 56 V83641 Oligonucleotide 2 use 7.21 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	0.2 46 5 033939 Microsatellite sequen 7.21 0.2 47 29 T66109 (dC-dA)n.(dG-dT)n pol 1.97 0.2 47 29 T66109 (dC-dA)n.(dG-dT)n pol 1.97 0.2 47 29 T66713 Repeat sequence from 7.21 0.2 47 29 T65716 Repeat sequence from 7.21 0.2 47 29 T65716 Repeat sequence from 7.21 0.2 47 29 T65726 Repeat sequence from 7.21 0.2 47 24 T30423 Compound in phase sim 1.97 0.2 47 5 033834 Microsatellite sequen 7.21 0.2 47 5 033859 Microsatellite sequen 7.21 0.2 47 5 033859 Microsatellite sequen 7.21 0.2 48 5 033959 Microsatellite 8.2 48 68 68 68 68 68 68 68 68 68 68 68 68 68	0.2 49 29 T65785 Repeat Sequence of a microsa 1.97 (0.2 49 5) 371122 Sequence of a microsa 1.97 (0.2 49 3) T80427 Hepatoma AS-30D Type 7.21 (0.2 50 29 T65791 Repeat sequence from 7.21 (0.2 50 29 T65774 Repeat sequence from 7.21 (0.2 50 29 T65717 Repeat sequence from 7.21 (0.2 50 29 T65787 Repeat sequence from 7.21 (0.2 50 29 T65777 Repeat sequence from 7.21 (0.2 51 29 T65777 Repeat sequence from 7.21 (0.2 51 29 T65777 Repeat sequence from 7.21 (0.2 51 29 T65777 Repeat sequence from 7.21 (0.2 51 29 T65777 Repeat sequence from 7.21 (0.2 51 29 T65777 Repeat sequence from 7.21 (0.2 51 29 T65777 Repeat sequence from 7.21 (0.2 51 29 T65777 Repeat sequence from 7.21 (0.2 51 29 T65777 Repeat sequence from 7.21 (0.2 51 29 T65777 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65795 Repeat sequence from 7.21 (0.2 51 29 T65	2 51 29 765764 Repeat sequence from 7.22 51 29 765773 Repeat sequence from 7.22 51 29 765773 Repeat sequence from 7.22 52 29 765706 Microsatellite sequen 1.99 7.22 52 29 766108 (dC-dA)n.(dG-dT)n pol 7.22 53 29 765768 Repeat sequence from 7.22 54 11 Q4338 Microsatellite sequen 7.22 55 29 765706 Microsatellite sequen 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 29 765707 Repeat sequence from 7.22 56 20 765707 Repeat sequence from 7.22 56 20 765707 Repeat sequence from 7.22 56 20 765707 Repeat sequence from 7.22 56 20 765707 Repeat sequence from 7.22 56 20 765707 Repeat sequence from 7.22 56 20 765707 Repeat sequence from 7.22 56 20 765707 Repeat sequence from 7.22 56 20 765707 Repeat sequence from 7.22 56 20 765707 Repeat sequence from 7.22 56 20 765707 Repeat sequence from 7.22 56 20 765707 Repeat sequence from 7.22 56 20 765707 Repeat sequence from 7.22 56 20 765707 Repeat sequence from 7.22 56 20 765707 Repeat sequence from 7.22 56 20 76

ပပ

2222222222222	222222222	21e+01 21e+01 21e+01 21e+01 21e+01 21e+01 21e+01 21e+01 21e+01 21e+01 37e+01 21e+01	447444444
36 11 12 12 13 13 15 15 15 15 15 15 15 15 15 15 15 15 15	rd. Tan. Tan. Tan. Tan. Tan. Tan. Tan. Tan		rareantoatr aschoogs off"
Polymorphic repeat se DNA molecule encoding Microsatellite marker Survival motor neuron Genotyping marker C27 Sequence flanking mar Sequence flanking mar Sequence flanking mar Sequence flanking mar Sequence flanking mar Sequence flanking mar EST clone FG340.  Polymorphic repeat se C-chromosomal microsa EST clone DT719.  Microsatellite marker Genotyping marker G16 Survival motor neuron Human brain Expressed	Enterococcus faecalis 7. EST clone CO244.  POLymorphic repeat se 1. EST clone DG329.  POlymorphic repeat se 7. Polymorphic repeat se 7. Polymorphic repeat se 7. Human gene signature 7. Human gene signature 7. Sequence flanking mar 7.	FOLYMOTPHIC repeat se Human gene signature Survival motor neuron Genotyping marker C17 Microsatellite marker Human brain Expressed Z-chromosomal microsa Sequence flanking mar Sequence flanking mar Polymorphic repeat se Microsatellite marker Survival motor neuron Genotyping marker C21 Grapevine ribosomal c Grapevine ribosomal c EST clone FBS18.	Sequence flanking must Grapevine ribosomal c Sequence flanking mar Polymorphic repeat as Polymorphic repeat as EST clone DG121.  Human brain Expressed 2-chromosomal microsa DNA molecule encoding Calcium ion channel a 105 gene differential Human brain Expressed Expressed Expressed Expressed Sequence Ta 2-chromosomal microsa EST clone EJ280.  Sequence flanking mar 3-fragment of Rat pu 2-chromosomal microsa Benaeus vannamei geno Human plasma platelet activa Human plasma platelet activa Human plasma platelet activa Human plasma platelet activa Human plasma platelet activa Human plasma platelet activa Human plasma platelet activa Human plasma platelet activa Human plasma platelet activa Human plasma platelet activa Human plasma platelet activa Human plasma platelet tumon plasma platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet activa Human platelet acti
rphic leculatell al mc ping ce fi ce	coccu one C rphic one D rphic rphic rphic se of	Tphic Jene Jing Jing Jing Jing Jing Jing Jing Jing	years and a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to be a second to
Polymorphic repea DNA molecule enco Microsatellite ma Survival motor ne Genotyping marker Sequence flanking Sequence flanking Polymorphic repea Sequence flanking Polymorphic repea EST clone FG340. Colymorphic repea EST clone FG340. Microsatellite man Genotyping marker Survival motor nen Burvival motor nen Burvival motor nen Burvival marker	Enterococcu EST clone C Polymorphic EST clone I Polymorphic Sequence of Human gene Human gene	FOLYMON Human Surviva Genotyr Microsa Human L Z-Chrom Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Sequenc Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva Surviva	Sequence flanki Sequence flanki Sequence flanki Polymorphic reporter and Polymorphic reporter and Polymorphic reporter and Polymorphic sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequence flanki Sequenc
55700 88266 88266 88870 88870 12053 12053 12094 12094 1257 1257 1257 1257 1257	34,80 9470 0110 0110 5682 6704 0357	01000000000000000000000000000000000000	143953 143953 143953 1455695 165695 165695 165695 165695 173826 173826 173826 173826 173826 174395 174395 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682 1768682
+>++++++++++++++++++++++++++++++++++++	X	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
00000000000000000000000000000000000000	310 320 320 320 320 330 330 330 330 330 33	3 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	3383 3382 3382 3382 3382 3382 3382 3382
00000000000000000000000000000000000000	200000000000000000000000000000000000000	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
00000000000000000000000000000000000000	0 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	18888888888888888888888888888888888888
4444 4444 4450 4451 4453 4453 4460 4460 4460 4460 4460 4460	4400 4400 4470 4474 475	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	4493 4494 4996 4997 4997 4997 4997 4997 4997
0000000 0 00000		0000 0000	
7.21e+01 7.21e+01 1.97e+01 1.97e+01 1.97e+01 7.21e+01 7.21e+01 1.97e+01 1.97e+01 1.97e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01	1.97 1.97 1.97 1.97 1.97 1.97	7.2.7.2.1.9.1.9.1.9.1.9.1.9.1.9.1.9.1.9.1.9.1	7.21e+01 7.21e+01 7.21e+01 1.97e+01 1.97e+01 1.97e+01 1.97e+01 1.97e+01 1.97e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01 7.21e+01
22.17.77.77.77.77.77.77.77.77.77.77.77.77.		7.2.7.2.1.9.1.9.1.9.1.9.1.9.1.9.1.9.1.9.1.9.1	2. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7.
		7.2.7.2.1.9.1.9.1.9.1.9.1.9.1.9.1.9.1.9.1.9.1	2. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7.
		7.2.7.2.1.9.1.9.1.9.1.9.1.9.1.9.1.9.1.9.1.9.1	2. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7.
22.17.77.77.77.77.77.77.77.77.77.77.77.77.		7.2.7.2.1.9.1.9.1.9.1.9.1.9.1.9.1.9.1.9.1.9.1	2. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7.
Human breast cancer r 7.21 Polymorphic repeat se 7.21 Human genome fragment 1.97 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Sequence of a human ( 7.21 Sequence of a human ( 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Ruman gene signature 7.21 Z-chromosomal microsa 7.21 Ruman gene signature 7.21	Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 1.97 Polymorphic repeat se 1.97 Polymorphic repeat se 1.97 Polymorphic repeat se 1.97 Polymorphic repeat se 1.97 Clone CO397_19 5.	Human genome fragment 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 1.97 Bovine male specific 7.21 Human breast cancer 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 1.97 Polymorphic repeat se 1.97 Human gene signature 1.97 Polymorphic repeat se 1.97 Requence flanking mar 1.97 Sequence flanking mar 1.97 Sequence flanking mar 1.97 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21	Polymorphic repeat se 7.22 Polymorphic repeat se 7.22 Polymorphic repeat se 7.29 Polymorphic repeat se 7.29 Polymorphic repeat se 7.21 Human secreted protei 1.99 Probe VAW409 for diag 7.22 Clone CO204, 7.22 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Fragile X diagnostic 7.21 Human gene signature 7.21 Human brain Expressed 1.97 Polymorphic repeat se 7.21 Human brain Expressed 1.97 Polymorphic repeat se 7.21 Human brain Expressed 1.97 Pragile X diagnostic 7.21 Human brain Expressed 1.97 Pragile X diagnostic 7.21 Human brain Expressed 1.27 Pragile X diagnostic 7.21 Pragile X diagnostic 7.21 Pragile X diagnostic 7.21 Pragile X diagnostic 7.21 Pragile X diagnostic 7.21 Pragile X diagnostic 7.21 Pragile X diagnostic 7.21 Pragile X diagnostic 7.21 Pragile X diagnostic 7.21 Pragile X diagnostic 7.21 Pragile X diagnostic 7.21
V17750 Human breast cancer r 7.21 T65655 Human genome fragment 1.97 T65667 Polymorphic repeat se 7.21 T65677 Polymorphic repeat se 7.21 T65671 Polymorphic repeat se 7.21 T65673 Polymorphic repeat se 7.21 T65674 Polymorphic repeat se 7.21 T65664 Polymorphic repeat se 7.21 T65664 Polymorphic repeat se 7.21 T65675 Polymorphic repeat se 7.21 T65675 Human gene signature 1.97 T65676 Polymorphic repeat se 1.97 T65666 Polymorphic repeat se 7.21 T65666 Polymorphic repeat se 7.21 T65666 Polymorphic repeat se 7.21 T65666 Polymorphic repeat se 7.21 T65666 Polymorphic repeat se 7.21 T656693 C-chromosomal microsa 7.21 T65693 Polymorphic repeat se 7.21 T65693 Polymorphic repeat se 7.21 T65693 C-chromosomal microsa 7.21 T26777 Human gene signature 7.21	T65659 Polymorphic repeat se 7.21 765688 Polymorphic repeat se 7.21 765692 Polymorphic repeat se 7.21 765692 Polymorphic repeat se 1.97 765674 Polymorphic repeat se 1.97 765688 Polymorphic repeat se 1.97 765688 Polymorphic repeat se 1.97 765688 Polymorphic repeat se 1.97 765688 V09101 5' nucleotide sequenc 7.21 Clone CG39719 5', 7.21 027094 Pradile x diamorphic repeat se 1.97 71027094	1057331 Human genome fragment 7.21 105668 Polymorphic repeat se 7.21 1056138 Bovine male specific 7.21 105678 Human breast cancer 7.21 105678 Human breast cancer 7.21 105678 Human gene signature 7.21 105667 Human gene signature 7.21 105667 Human gene signature 7.21 105667 Human gene signature 7.21 105702 Human gene signature 7.21 105703 Human gene signature 7.21 105704 Sequence flanking mar 1.97 105676 Polymorphic repeat se 7.21 105676 Polymorphic repeat se 7.21 105676 Polymorphic repeat se 7.21	165694 Polymorphic repeat se 7.27 F65694 Polymorphic repeat se 7.27 F65699 Polymorphic repeat se 7.27 F65699 Polymorphic repeat se 7.27 F65699 Polymorphic repeat se 7.27 F65699 Polymorphic repeat se 7.27 F65679 Polymorphic repeat se 7.27 F65679 Polymorphic repeat se 7.27 F65699 Polymorphic repeat se 7.27 F65690 Polymorphic repeat se 7.27 F65690 Polymorphic repeat se 7.27 F65690 Polymorphic repeat se 7.27 F65690 Polymorphic repeat se 7.27 F65690 Polymorphic repeat se 7.27 F65690 Polymorphic repeat se 7.27 F65690 Polymorphic repeat se 7.27 F65690 Polymorphic repeat se 7.27 F65690 Polymorphic repeat se 7.27 F65690 Polymorphic repeat se 7.27 F65690 Polymorphic repeat se 7.27 F65702 Polymorphic repeat se 7.27 F65702 Polymorphic repeat se 7.27 F65703 Fragile X diagnostic 7.27 Fragile X diagnostic 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorphic repeat se 7.27 F65703 Polymorp
43 V17750 Human breast cancer r 7.21 29 T65655 Human genome fragment 1.97 29 T65672 Polymorphic repeat se 7.21 29 T65672 Polymorphic repeat se 7.21 29 T65671 Polymorphic repeat se 7.21 29 T65671 Polymorphic repeat se 7.21 29 T65674 Polymorphic repeat se 7.21 29 T65664 Polymorphic repeat se 7.21 29 T65664 Polymorphic repeat se 7.21 29 T65664 Polymorphic repeat se 7.21 29 T65672 Polymorphic repeat se 7.21 29 T65674 Polymorphic repeat se 7.21 29 T65675 Polymorphic repeat se 7.21 29 T65676 Polymorphic repeat se 7.21 29 T65666 Polymorphic repeat se 7.21 29 T65666 Polymorphic repeat se 7.21 29 T65666 Polymorphic repeat se 7.21 29 T656693 Polymorphic repeat se 7.21 29 T656693 Polymorphic repeat se 7.21 29 T65661 Polymorphic repeat se 7.21 20 T65677 Human gene signature 7.21	29 T65659 Polymorphic repeat se 7.21 29 T65689 Polymorphic repeat se 7.21 29 T65692 Polymorphic repeat se 7.21 29 T65694 Polymorphic repeat se 1.97 29 T65674 Polymorphic repeat se 1.97 29 T65678 Polymorphic repeat se 1.97 29 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T65688 Polymorphic repeat se 1.97 20 T6568 Polymorphic repeat se 1.97 20 T6668 Polymorphic repea	11 077331 Human genome fragment 7.21 29 765668 Polymorphic repeat se 7.21 29 765668 Polymorphic repeat se 1.97 20 765673 Bovine male specific 7.21 29 765678 Human breast cancer 7.21 29 765678 Human gene signature 7.21 29 765694 Polymorphic repeat se 7.21 29 765694 Polymorphic repeat se 1.97 29 765694 Polymorphic repeat se 1.97 29 765697 Human gene signature 7.21 29 7656701 Sequence flanking mar 1.97 20 765701 Sequence flanking mar 1.97 20 76576 Polymorphic repeat se 7.21 20 76576 Polymorphic repeat se 7.21 20 765676 Polymorphic repeat se 7.21 20 765676 Polymorphic repeat se 7.21	Polymorphic repeat se 7.22 Polymorphic repeat se 7.22 Polymorphic repeat se 7.29 Polymorphic repeat se 7.29 Polymorphic repeat se 7.21 Human secreted protei 1.99 Probe VAW409 for diag 7.22 Clone CO204, 7.22 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Polymorphic repeat se 7.21 Fragile X diagnostic 7.21 Human gene signature 7.21 Human brain Expressed 1.97 Polymorphic repeat se 7.21 Human brain Expressed 1.97 Polymorphic repeat se 7.21 Human brain Expressed 1.97 Pragile X diagnostic 7.21 Human brain Expressed 1.97 Pragile X diagnostic 7.21 Human brain Expressed 1.27 Pragile X diagnostic 7.21 Pragile X diagnostic 7.21 Pragile X diagnostic 7.21 Pragile X diagnostic 7.21 Pragile X diagnostic 7.21 Pragile X diagnostic 7.21 Pragile X diagnostic 7.21 Pragile X diagnostic 7.21 Pragile X diagnostic 7.21 Pragile X diagnostic 7.21 Pragile X diagnostic 7.21
165 43 V17750 Human breast cancer r 7.21 2 175 29 T6565 Human genome fragment 1.97 2 177 11 027282 Human genome fragment 1.97 2 178 29 T65667 Polymorphic repeat se 7.21 2 180 29 T65677 Polymorphic repeat se 7.21 2 180 29 T65673 Polymorphic repeat se 7.21 2 180 29 T65664 Polymorphic repeat se 7.21 2 190 29 T65664 Polymorphic repeat se 7.21 2 191 29 T65672 Polymorphic repeat se 7.21 2 192 19 T65672 Polymorphic repeat se 7.21 2 194 29 T65666 Polymorphic repeat se 7.21 2 194 29 T65666 Polymorphic repeat se 7.21 2 194 3 Q20374 Sequence of a human (7.21 2 194 3 Q15206 Polymorphic repeat se 7.21 2 197 3 G15206 Phage phil.2.2 subclon 1.97 2 198 49 V48138 Z-chromosomal microsa 7.21 2 200 49 V48138 Z-chromosomal microsa 7.21 2 200 49 V48139 Z-chromosomal microsa 7.21 2 200 49 V48130 Z-chromosomal microsa 7.21 2 200 49 V48140 Z-chromosomal microsa 7.21	2 200 29 T65659 Polymorphic repeat se 7.21 202 29 T65689 Polymorphic repeat se 7.21 2 202 29 T65689 Polymorphic repeat se 7.21 2 208 29 T65692 Polymorphic repeat se 1.97 2 211 29 T65674 Polymorphic repeat se 1.97 2 211 29 T65673 Polymorphic repeat se 1.97 2 218 40 V09101 5' nucleotide sequenc 7.21 2 18 41 V15715 Clone CG397_19 5' 7.21 2 218 4 V05044 Pranile x diamorphic repeat se 1.97 2 218 41 V15715 Clone CG397_19 5' 7.21 2 2 4 V27094 Pranile x diamorphic repeat se 1.97 2 2 4 V27094 Pranile x diamorphic repeat se 1.97 2 2 4 V27094 Pranile x diamorphic 7.21 2 2 4 V27094 Pranile x diamorphic 7.21 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 221 11 Q77331 Human genome fragment 7.21 22 22 29 765668 Polymorphic repeat se 7.21 22 22 24 6 Q36138 Bovine male specific 7.21 22 24 4 0 Q36138 Bovine male specific 7.21 22 25 29 T65678 Polymorphic repeat se 7.21 22 22 29 T65678 Human breast cancer 7.21 22 22 29 T65694 Polymorphic repeat se 7.21 22 23 29 T65694 Polymorphic repeat se 7.21 23 23 11 9 T22702 Human gene signature 7.21 23 21 124383 Human gene signature 7.21 23 21 124383 Human gene signature 7.21 23 21 24 25 21 T65701 Sequence flanking mar 1.97 240 29 T65676 Polymorphic repeat se 7.21 240 29 T65676 Polymorphic repeat se 7.21 240 29 T65681 Polymorphic repeat se 7.21 240 29 T65681 Polymorphic repeat se 7.21 240 29 T65681 Polymorphic repeat se 7.21 240 29 T65681 Polymorphic repeat se 7.21 240 29 T65681 Polymorphic repeat se 7.21 240 29 T65681 Polymorphic repeat se 7.21 240 29 T65681 Polymorphic repeat se 7.21 240 29 T65681 Polymorphic repeat se 7.21 240 240 240 240 240 240 240 240 240 240	105654 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic repeat se 7.27 Polymorphic re
0.2 165 43 V17750 Human breast cancer r 7.21 17 11 27.28 Human genome fragment 1.97 20 0.2 177 11 27728 Human genome fragment 1.97 21 76562 Polymorphic repeat se 7.21 180 29 76567 Polymorphic repeat se 7.21 180 29 76567 Polymorphic repeat se 7.21 180 29 76567 Polymorphic repeat se 7.21 180 29 76567 Polymorphic repeat se 7.21 180 29 765664 Polymorphic repeat se 7.21 190 29 765664 Polymorphic repeat se 7.21 191 29 76567 Polymorphic repeat se 7.21 191 29 76567 Polymorphic repeat se 7.21 192 39 76567 Polymorphic repeat se 7.21 192 39 76567 Polymorphic repeat se 7.21 192 39 76566 Polymorphic repeat se 7.21 192 39 76566 Polymorphic repeat se 7.21 192 39 76566 Polymorphic repeat se 7.21 192 39 76566 Polymorphic repeat se 7.21 192 39 76566 Polymorphic repeat se 7.21 192 39 76566 Polymorphic repeat se 7.21 192 39 76566 Polymorphic repeat se 7.21 192 39 76566 Polymorphic repeat se 7.21 192 39 76566 Polymorphic repeat se 7.21 193 29 76566 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.21 193 20 76569 Polymorphic repeat se 7.	0.2 200 29 T65559 Polymorphic repeat se 7.27 202 202 29 T65589 Polymorphic repeat se 7.21 20 203 29 T65589 Polymorphic repeat se 7.21 20 2 208 29 T65592 Polymorphic repeat se 7.21 20 T65574 Polymorphic repeat se 1.97 0.2 211 29 T65573 Polymorphic repeat se 1.97 0.2 214 29 T65589 Polymorphic repeat se 1.97 0.2 218 41 0.09101 S' nucleotide sequenc 7.21 0.2 218 41 0.15715 Clone CG37719 S' 7.21 0.2 219 4 0.27094 Fradile x diamorphic repeat se 1.97 0.2 219 4 0.27094 Fradile x diamorphic 7.21 0.2 219 4 0.27094	0.2 221 11 Q77331 Human genome fragment 7.21 0.2 221 29 765666 Polymorphic repeat se 7.21 0.2 22 29 765666 Polymorphic repeat se 7.21 0.2 22 43 V17749 Human breast cancer 7.21 0.2 225 29 765678 Human breast cancer 7.21 0.2 226 19 72161 Human gene signature 7.21 0.2 220 29 765679 Polymorphic repeat se 7.21 0.2 230 29 765694 Polymorphic repeat se 1.97 0.2 231 19 722702 Human gene signature 7.21 0.2 235 29 765667 Human gene signature 7.21 0.2 236 29 765670 Polymorphic repeat se 1.97 0.2 236 30 772065 Sequence flanking mar 1.97 0.2 236 30 743945 Sequence flanking mar 1.97 0.2 240 29 765671 Polymorphic repeat se 7.21 0.2 240 29 765671 Polymorphic repeat se 7.21 0.2 240 29 765671 Polymorphic repeat se 7.21 0.2 240 29 765671 Polymorphic repeat se 7.21 0.2 240 29 765671 Polymorphic repeat se 7.21 0.2 240 29 765671 Polymorphic repeat se 7.21 0.2 240 29 765671 Polymorphic repeat se 7.21 0.2 240 29 765671 Polymorphic repeat se 7.21 0.2 240 29 765671 Polymorphic repeat se 7.21 0.2 240 29 765671 Polymorphic repeat se 7.21 0.2 240 29 765671 Polymorphic repeat se 7.21 0.2 240 29 765671 Polymorphic repeat se 7.21 0.2 240 29 765671 Polymorphic repeat se 7.21 0.2 240 29 765671 Polymorphic repeat se 7.21 0.2 240 240 240 240 240 240 240 240 240 24	247 29 1'55500 Polymorphic repeat se 7.22 244 29 1'55554 Polymorphic repeat se 7.22 244 29 1'55591 Polymorphic repeat se 7.22 244 29 1'55699 Polymorphic repeat se 7.22 244 29 1'55699 Polymorphic repeat se 7.22 245 24 4 1'30918 Human secreted protein 1.97 259 29 1'55679 Polymorphic repeat se 7.22 258 53 1'89477 EST clone CO204. 7.22 259 29 1'55659 Polymorphic repeat se 7.22 259 29 1'55659 Polymorphic repeat se 7.22 259 29 1'55699 Polymorphic repeat se 7.22 250 29 1'55691 Polymorphic repeat se 7.22 250 29 1'55691 Polymorphic repeat se 7.22 250 29 1'55691 Polymorphic repeat se 7.22 250 29 1'55691 Polymorphic repeat se 7.22 250 29 1'55691 Polymorphic repeat se 7.22 250 29 1'55691 Polymorphic repeat se 7.22 250 29 1'55691 Polymorphic repeat se 7.22 250 29 1'55691 Polymorphic repeat se 7.22 250 29 1'55692 Polymorphic repeat se 7.22 250 29 1'55702 Polymorphic repeat se 7.22 250 29 1'55702 Polymorphic repeat se 7.22 250 29 1'55702 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repeat se 7.22 250 29 1'55703 Polymorphic repea

υυυ υυ

υυ

O

										<u> </u>	ط ط ح													नु स					근근
21e+01 21e+01 21e+01 21e+01 21e+01 97e+01 97e+01 97e+01	97e+01 97e+01 21e+01 21e+01			.97e+0	.97e+0	.21e+01	дд,	.21e+01	12.	22.		700		212	22	2.2	.21		.21	21	22	97	22.5	22	22	2.5	217	.21e+	7.21e+0 7.21e+0
1 p /. ttei 7. lar 7. las 7. las 7. gen 1. gen 1. mar 1.	tto 1	ch 7	ge 7 co 7 Bg 7		_		oro 7 ost 7			ene 7 pr 7	n Z 7		rot 7								ne ei	11.	8	9	ot o			90.0	
Helicobacter pylori p Human secreted protei Mus musculus vascular Secreted protein FB78 Mouse neutrophil elas Human cartilage link Human cathepsin K gen Neurotrophin-6 cDNA. TGF-beta inducible re Sequence flanking mar	king m ng fac d prot n gene	o rat a RAP- DNA S	ating am of lcin E	ta T c	Mouse B7-1 exons 1, 3 Rat IgH 3'-enhancer.	equence centre entre	sion F	CBMP2b2 cDNA encoding Mouse B7-1 exons 1, 2	ene cyc	int genetic	cDNA encoding human Z Gastrin releasing pep	In re	ing pro	CBMP2	ding	gand c	g an a	ouse g	t C7-alpha-H cor inositol polyph	xons 1,	C	U	antigen	cDNA. antigen	clone	ated	tne cr se ne	in-1 t se ne	[a]
secreted secreted secreted red prote cartillad catheps crophin-(	flan ivatin crete	of LET oding	timul upstre	D3del	7-1 ex 3'-en	ide se steoge	nic fu e enco	CDNA	Tobacco lycopene Human RADcompB cl	checkpoint morphogeneti	coding	gastr 1BP (G	ecrete ncoupl	buman human	e enco	as lic	coding	of mc	Rabbit C7-alpha-H	37-1 e.	rat T	codin	MA. 2D19 a	n CD19 c n CD19 a	apiens	Stress activated	se or protea	se Nexin-	alpha an
alloobact uman secri- us musculi use neut uman cart uman cath eurotroph GF-beta i	quence quence ia act man se use ut	on 1 c A enco le-spe	lony s gion u	rine (	use B	Nucleotide se Human osteoge	teoger	MP2b2 ouse B	Tobacco Human R	Human c Bone mo	ONA en	ouse R	ouse u	repro	equenc	uman F	DNA en	ortion NA eng	Rabbit Mouse i	Mouse B7-	Human F	DNA	CDI9 CL Human (	Human ( Human (	lomo sa	tress	equenci Iuman	Proteas Human p	N-I a
																						4 0 (							
T443045 V84569 V33199 V33755 Q70142 T05663 Q98919	3943 3411 3788	1575 1732 2305	0038 0398 6430	8012	1048	1689 5213	0238 3150	2610	0206	1036	0894	1844 9158	4305	2710	3144	3207	0895	12097	71053	01039	29986	58786	90612	38556	32415	10641	47670	89924	20496
*****	2010	200	011	) r r	- 2	0 /	ÓΦ	00 1	40	NOV	00	2 2	28	279	ة م ة	200	500	28	22.0	7 7 2	23.	32	<del>-1</del> π	24	46	77	8 4	15	r (•) (•
1302 20 1302 20 1325 45 1325 45 1321 55 1400 11 1442 11 1442 11	1470 3 1470 3 1493 1 1517 5	1533 3 1538 1542 2	1548	1560	1570 1	1579 4	1586 ( 1586	1586	1614	1647	1690	1700 1700	1732	1788	1788	1790	1813	1851	1876	1888	1905	1921	$\frac{1921}{1922}$	1922	1939	1986	2015	2028	2029
0000000000											. ~ ~	~ ~	~ ~	~ ~ ~	N (0 (	N (N (	900	101	400	101	100	7 (7	2 2	20	101	7 (7	20	1010	9 (7) (
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																										~ ~	~ ~	. m a	n m n
44444																													
595 596 597 599 600 603 603						c 619 620	621	623		0 627 0 627 0 828			c 633	635	638		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				0 0		0 r	000	0.0	65	99	000	000
000																													
000		0 0										-		<del></del>															
216+01 976+01 216+01 216+01 976+01 976+01 976+01	97e+01 21e+01 21e+01 97e+01	1.97e+01 1.97e+01 2.21e+01	7.21e+01	7.21e+01 7.21e+01	7.21e+01 7.21e+01 7.310+01	97e+01	. 97	1.97	. 2.5	1.97	7.21e+01 1.97e+01	2.7	1.97	7.2	7.21	7.21	7.21e+01 1.97e+01	1.97	7.21	7.21e+ 7.21e+	21	21	21e+	21	27	7.	7.23	7.21e+ 7.21e+	7.
.21e+01 .21e+01 .21e+01 .21e+01 .97e+01 .97e+01 .21e+01	97e+01 21e+01 21e+01 97e+01	1.97e+01 1.97e+01 2.21e+01	7.21e+01	7.21e+01 7.21e+01	7.21e+01 7.21e+01 7.310+01	97e+01	. 97	1.97	7.21	1.97	7.21	2.7	1.97	7.2	7.21	7.21	$\frac{7.21}{1.97}$	1.97	7.21	7.21	7.21	7.21	7.21	7.21	19 1.97 W 7.21	7.21	7.23	7.21	7.21e+ 7.21e+
type pro 1.97e+01 fintron 7.21e+01 fintron 7.21e+01 decects 7.21e+01 detects 1.97e+01 kking mar 1.97e+01 nking mar 1.97e+01 plasmid p 1.97e+01	97e+01 21e+01 21e+01 97e+01	1.97e+01 1.97e+01 2.21e+01	7.21e+01	7.21e+01 7.21e+01	7.21e+01 7.21e+01 7.310+01	97e+01	. 97	1.97	7.21	1.97	7.21	2.7	1.97	7.2	7.21	7.21	$\frac{7.21}{1.97}$	1.97	7.21	7.21	7.21	7.21	7.21	7.21	encoding 1.97 SCARECROW 7.21	7.21 v enithel 7.21	lar enhan 7.21	7.21	7.21e+ 7.21e+
itz-type pro 1.97e+01 itz-type pro 1.97e+01 itz-type pro 1.97e+01 icus faecalis 7.21e+01 id detects 1.97e+01 flanking mar 1.97e+01 flanking mar 1.97e+01 flanking mar 1.97e+01 flanking mar 1.97e+01 of plasmid p 1.97e+01	le-specific 1.97e+01 cossin cDNA. 7.21e+01 rosin cDNA. 7.21e+01 mpl DNA SEQ 1.97e+01	ampi DNA SEQ 1.974+01 0 26 detects 1.97e+01 0 EK634 7.21e+01	Sistance-as 7.21e+01 lanking mar 1.97e+01 lanking mar 7.21e+01	lanking mar 7.21e+01 ival motor 7.21e+01	lanking mar 7.21e+01 lanking mar 7.21e+01	97e+01	. 97	1.97	7.21	1.97	7.21	2.7	1.97	7.2	7.21	7.21	$\frac{7.21}{1.97}$	1.97	7.21	7.21	7.21	7.21	7.21	7.21	encoding 1.97 SCARECROW 7.21	7.21 v enithel 7.21	lar enhan 7.21	cellular enhan 7.21 ce encoding hum 7.21	around marke 7.21e+ around marke 7.21e+
cus faccalis 7.21e+01 itz-type pro 1.97e+01 icus faccalis 7.21e+01 cus faccalis 7.21e+01 id 3 detects 1.97e+01 flanking mar 1.97e+01 flanking mar 1.97e+01 flanking mar 1.97e+01 flanking mar 1.97e+01 of plasmid p 1.97e+01	le-specific 1.97e+01 cossin cDNA. 7.21e+01 rosin cDNA. 7.21e+01 mpl DNA SEQ 1.97e+01	Nrampi DNA SEQ 1.97e+01  obe 26 detects 1.97e+01  one EK634. 7.21e+01	Sistance-as 7.21e+01 lanking mar 1.97e+01 lanking mar 7.21e+01	lanking mar 7.21e+01 ival motor 7.21e+01	lanking mar 7.21e+01 lanking mar 7.21e+01	97e+01	. 97	1.97	7.21	1.97	7.21	2.7	1.97	7.2	7.21	7.21	$\frac{7.21}{1.97}$	1.97	7.21	7.21	7.21	7.21	7.21	7.21	encoding 1.97 SCARECROW 7.21	7.21 v enithel 7.21	lar enhan 7.21	ellular enhan 7.21 encoding hum 7.21	equence around marke 7.21e+ equence around marke 7.21e+
Enquence transming in 1.21e+01  Human Kunitz-type pro 1.97e+01  3. portion of intron 7.21e+01  Bre probe 43 detects 1.97e+01  Sequence flanking mar 1.97e+01  Sequence flanking mar 1.97e+01  Fragment of plasmid p 1.97e+01	Bovine male-specific 1.97e+01 Mouse Fibrosin cDNA. 7.21e+01 Mouse fibrosin cDNA. 7.21e+01 Bison Nrampl DNA SEQ 1.97e+01	Bison Nrampi DNA SEQ 1.97e+01 DNA probe 26 detects 1.97e+01 EST clone EK634. 7.21e+01	Natural resistance aste+0.1 Sequence flanking mar 1.97e+0.1 Sequence flanking mar 7.21e+0.1	Sequence flanking mar 7.21e+01 Human survival motor 7.21e+01	Sequence flanking mar 7.21e+01 Sequence flanking mar 7.21e+01	Viral infection gene 1.97e+01	Human TACE-11ke DNA: 7.21 Sequence flanking mar 1.97	Sequence flanking mar 1.97 Sequence flanking mar 1.97	Sequence flanking mar 1.97 Sequence flanking mar 7.21	Sequence flanking mar 7.21 TGF-beta inducible re 1.97	Promoter sequence of 1.97 5'ALT DNA sequence co 7.21 Manie B7-1 even 6 (Cv 1.97	Mouse b/ - r exon o (c) - r color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to co	Viral infection gene 7.21 GBMT modified transcr 1.97 Dartial sed obtained 7.21	Coding sequence for s 7.21 Tie receptor tyrosine 7.21	Tumour suppression ge 7.21 Gene No. 31 encoding 7.21	Bovine PIT-1 exon 6 s 7.21 Sequence flanking mar 7.21	Sequence flanking mar 7.21 Dirofilaria immitis p 1.97	Sequence flanking mar 1.97 Sequence flanking mar 1.97	Sequence around marke 7.21 Sequence around marke 7.21	Enterococcus faecalis 7.21 Interleukin-6.	Interleukin 6. 7.21 Sequence flanking mar 7.21	Sequence flanking mar 7.21	Sequence encoding rat 7.21	Human nov gene promot 1.97 Tobacco epi-5-aristol 7.21	DNA sequence encoding 1.9/ Arabidopsis SCARECROW 7.21	HME1. 7.21	Murine cellular enhan 7.23	Murine cellular enhan 7.21 Sequence encoding hum 7.21	Sequence around marke 7.21e+ Sequence around marke 7.21e+
Entercooccus faccalis 7.21e+01 Human Kunitz-type pro 1.97e+01 3. portion of intron 7.21e+01 Entercooccus faccalis 7.21e+01 DNA probe 43 detects 1.97e+01 Sequence flanking mar 1.97e+01 Sequence flanking mar 1.97e+01 Fragment of plasmid p 1.97e+01	Bovine male-specific 1.97e+01 Mouse Fibrosin cDNA. 7.21e+01 Mouse fibrosin cDNA. 7.21e+01 Bison Nrampl DNA SEQ 1.97e+01	Bison Nrampi DNA SEQ 1.97e+01 DNA probe 26 detects 1.97e+01 EST clone EK634. 7.21e+01	Natural resistance aste+0.1 Sequence flanking mar 1.97e+0.1 Sequence flanking mar 7.21e+0.1	Sequence flanking mar 7.21e+01 Human survival motor 7.21e+01	Sequence flanking mar 7.21e+01 Sequence flanking mar 7.21e+01	Viral infection gene 1.97e+01	Human TACE-11ke DNA: 7.21 Sequence flanking mar 1.97	Sequence flanking mar 1.97 Sequence flanking mar 1.97	Sequence flanking mar 1.97 Sequence flanking mar 7.21	Sequence flanking mar 7.21 TGF-beta inducible re 1.97	Promoter sequence of 1.97 5'ALT DNA sequence co 7.21 Manie B7-1 even 6 (Cv 1.97	Mouse b/ - r exon o (c) - r color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to color to co	Viral infection gene 7.21 GBMT modified transcr 1.97 Dartial sed obtained 7.21	Coding sequence for s 7.21 Tie receptor tyrosine 7.21	Tumour suppression ge 7.21 Gene No. 31 encoding 7.21	Bovine PIT-1 exon 6 s 7.21 Sequence flanking mar 7.21	Sequence flanking mar 7.21 Dirofilaria immitis p 1.97	Sequence flanking mar 1.97 Sequence flanking mar 1.97	Sequence around marke 7.21 Sequence around marke 7.21	Enterococcus faecalis 7.21 Interleukin-6.	Interleukin 6. 7.21 Sequence flanking mar 7.21	Sequence flanking mar 7.21	Sequence encoding rat 7.21	Human nov gene promot 1.97 Tobacco epi-5-aristol 7.21	DNA sequence encoding 1.9/ Arabidopsis SCARECROW 7.21	HME1. 7.21	Murine cellular enhan 7.23	Murine cellular enhan 7.21 Sequence encoding hum 7.21	Sequence around marke 7.21e+ Sequence around marke 7.21e+
17.2039 Sequence Limiting 17.21e+01 046914 Human Kunitz-type pro 197e+01 046914 3 Portion of intro 7.21e+01 048914 3 Portion of intro 7.21e+01 048537 DNA probe 43 detects 1.97e+01 074932 Sequence flanking mar 1.97e+01 0772052 Sequence flanking mar 1.97e+01 0772053 Fumour suppression ge 7.21e+01 08.06158 Fragment of plasmid p 1.97e+01	1 Q06235 Bovine male-specific 1.97e+01 B T33398 Mouse Fibrosin CDNA. 7.21e+01 B T61383 Mouse Fibrosin CDNA. 7.21e+01 3 V28925 Bison Nrampl DNA SEQ 1.97e+01	3 V28928 Bison Nrampi DNA SEQ 1:976+01 6 Q8520 DNA probe 26 detects 1:976+01 3 V88419 EST clone EK634 7.216+01	6 092042 Natural resistance-as /.2te+0.1 0 143050 Sequence flanking mar 7.2te+0.1 0 172055 Sequence flanking mar 7.2te+0.1	0 143935 Sequence flanking mar 7.21e+01 2 T18874 Human survival motor 7.21e+01	0 143948 Sequence flanking mar 7.21e+01 0 172060 Sequence flanking mar 7.21e+01	0 143940 Sequence Lianking mar /.zievo. 8 V06140 Viral infection gene 1.97e+01	9 V61632 Human TACE-11Ke DNA: 7.21 0 T72057 Sequence flanking mar 1.97	0 T43937 Sequence flanking mar 1.97 0 T72064 Sequence flanking mar 1.97	.0 T43944 Sequence flanking mar 1.97 .0 T43931 Sequence flanking mar 7.21	0 T72051 Sequence flanking mar 7.21 9 Q98920 TGF-beta inducible re 1.97	12 V65399 Promoter sequence of 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter 1.97 Promoter	101034 Mouse B/ 1 excur of Cr 1.27 12 V29366 Calcium ion Channel a 7.21	88 V06122 Viral infection gene 7.23 2 Q13632 GBMT modified transcr 1.97 5 mccrol partial cor Obtained 7.21	19 100/91 Caing sequence for 8 7.21 (19 100) Tie receptor tyrosine 7.21	8 V06156 Tumour suppression ge 7.21 55 V08841 Gene No. 31 encoding 7.21	30	30 T43942 Sequence flanking mar 7.21 12 Q70049 Dirofilaria immitis P 1.97	30 T43938 Sequence flanking mar 1.9/ 30 T72058 Sequence flanking mar 1.97	30 T43927 Sequence around marke 7.21 30 T72047 Sequence around marke 7.21	60 X13502 Enterococcus faecalis 7.21 1 N90255 Interleukin-6.	1 N80299 Interleukin 6. 7.21	30 T72061 Sequence flanking mar 7.21	2 N70395 Sequence encoding rat 7.21	6 Q36051 Human nov gene promot 1:97 28 T58339 Tobacco epi-5-aristol 7.21	3 N40211 DNA sequence encoding 1.97	7 041102 HME1. 7.21	44 V3560/ Human mammary epichet 7.21 1 Q06091 Murine cellular enhan 7.21	1 Q06091 Murine cellular enhan 7.21 2 N70394 Sequence encoding hum 7.21	30 T72049 Sequence around marke 7.21e+ 30 T43929 Sequence around marke 7.21e+
500 60 X13700 Entercoccus facealis 7.21e+01 502 7 Q46914 Human Kunitz-type pro 1.97e+01 508 3 V69714 3 Portion of intro 7.21e+01 537 60 X13917 Entercoccus facealis 7.21e+01 543 16 Q8537 DNA probe 43 detects 1.97e+01 545 30 T49932 Sequence flanking mar 1.97e+01 545 38 V05158 Tumour suppression ge 7.21e+01 557 38 V05158 Fragment of plasmid p 1.97e+01	560 1 Q06235 Bovine male-specific 1.97e+01 571 28 T33598 Mouse Fibrosin CDNA. 7.21e+01 571 28 T61383 Mouse Fibrosin CDNA. 7.21e+01 585 43 V28925 Bison Nrampl DNA SEQ 1.97e+01	587 43 V28928 Bison Nrampi DNA SEQ 1.97e+01 592 16 Q85520 DNA probe 26 detects 1.97e+01 594 53 V88419 EST clone EK634. 7.21e+01	597 16 092042 Natural resistance-as /.41e+v1 600 30 143950 Sequence flanking mar 7.21e+01 605 30 172055 Sequence flanking mar 7.21e+01	605 30 143935 Sequence flanking mar 7.21e+01 637 22 T18874 Human survival motor 7.21e+01	672 30  T43948	688 30 T43940 Sequence Lanking Mar /.zieru. 698 38 V06140 Viral infection gene 1970+01	704 49 V61632 Human TACE-11Ke DNA. 7.21 705 30 T72057 Sequence flanking mar 1.97	705 30 T43937 Sequence flanking mar 1.97 724 30 T72064 Sequence flanking mar 1.97	724 30 T43944 Sequence flanking mar 1.97 751 30 T43931 Sequence flanking mar 7.21	751 30 172051 Sequence flanking mar 7.21 761 19 Q98920 TGF-beta inducible re 1.97	766 52 V65399 Promoter sequence of 1.97 780 30 1743181 5'ALT DNA sequence co 7.21	818 1/ 101034 Mouse b/-1 Exon (17 117) 829 42 V29366 Calcium ion Channel a 7.21	835 38 V05122 Viral intection gene 7.22 848 2 013632 GBMT modified transcr 1.97 867 25 mcc701 partial sed Ohtained 7.23	875 49 V58364 Coding Sequence for 8 7.21 882 22 714630 Tie receptor tyrosine 7.21	884 38 V06156 Tumour suppression ge 7.21 970 55 V08841 Gene No. 31 encoding 7.21	972 30 168932 Bovine PIT-1 exon 6 s 7.21 1000 30 172062 Sequence flanking mar 7.21	1000 30 T43942 Sequence flanking mar 7.21 1016 12 Q70049 Dirofilaria immitis p 1.97	1045 30 T43938 Sequence flanking mar 1.9/	1050 30 T43927 Sequence around marke 7.21 1050 30 T72047 Sequence around marke 7.21	1091 60 X13502 Enterococcus faecalis 7.21 1139 1 N90255 Interleukin-6.	1139 1 N80299 Interleukin 6. 7.21	1166 30 172061 Sequence flanking mar 7.21	11/6 2 V10003 Bovine 1 Specific Seq. 7.21	1199 6 Q36051 Human nov gene promot 1:97 1215 28 T58339 Tobacco epi-5-aristol 7:21	1217 3 N40211 DNA sequence encoding 1.97	1245 7 041102 HME1. 7.21	1245 44 (3550) Human mammary epicate (7.2)	1249 1 Q06091 Murine cellular enhan 7.21 1257 2 N70394 Sequence encoding hum 7.21	1260 30 T72049 Sequence around marke 7.21e+ 1260 30 T43929 Sequence around marke 7.21e+
500 60 X13700 Entercoccus faecalis 7.21e+01 502 7 046914 Human Kunitz-type pro 1.97e+01 508 53 V69714 3' portion of intron 7.21e+01 537 60 X13917 Entercoccus faecalis 7.21e+01 543 16 085537 Entercoccus faecalis 7.21e+01 545 30 T43932 Sequence flanking mar 1.97e+01 545 30 T72052 Sequence flanking mar 1.97e+01 557 38 V06158 Fragment of plasmid p 1.97e+01	560 1 Q06235 Bovine male-specific 1.97e+01 571 28 T33598 Mouse Fibrosin cDNA. 7.21e+01 571 28 T61383 Mouse Fibrosin cDNA. 7.21e+01 585 43 V28925 Bison Nrampl DNA SEQ 1.97e+01	587 43 V28928 Bison Nrampi DNA SEQ 1.3/e+U1 592 16 Q85520 DNA probe 26 detects 1.97e+U1 594 53 V68419 EST clone EK634. 7.21e+U1	597 16 092942 Natural resistance-as / .tle+ul 600 30 T43950 Sequence flanking mar 7.21e+0l 605 30 T72055 Sequence flanking mar 7.21e+0l	605 30 T43935 Sequence flanking mar 7.21e+01 637 22 T18874 Human survival motor 7.21e+01	672 30 143948 Sequence flanking mar 7.21e+01 688 30 172060 Sequence flanking mar 7.21e+01	688 30 143940 Sequence Lianking mar /.zre+or 698 38 VO6140 Viral infection gene 1.97e+01	704 49 V61632 Human TACE-11Ke DNA. 7.21 705 30 T72057 Sequence flanking mar 1.97	2 705 30 T43937 Sequence flanking mar 1.97 Sequence flanking mar 1.97 Sequence flanking mar 1.97	2 724 30 143944 Sequence flanking mar 1.97 2 751 30 143931 Sequence flanking mar 7.21	2 751 30 172051 Sequence flanking mar 7.21 761 19 Q98920 TGF-beta inducible re 1.97	2 766 52 V65399 Promoter sequence OI 1.97 2 780 30 T43181 5'ALT DNA sequence CO 7.21	2 818 1/ 101034 Mouse B/ 1 exc. 0 (cr. 177) 2 829 42 V29366 Calcium ion channel a 7.21	2 848 2 0106122 Viral infection gene 7.22 848 2 013632 GBMT modified transcr 1.97 0007 3 mcc701 partial sem Obtained 7.2	2 875 49 V58364 Coding Sequence for 7.21 872 2 114630 Tie receptor tyrosine 7.21	2 884 38 V06156 Tumour suppression ge 7.21 970 55 V08841 Gene No. 31 encoding 7.21	2 972 30 168932 Bovine PIT-1 exon 6 s 7.21 2 1000 30 172062 Sequence flanking mar 7.21	2 1000 30 T43942 Sequence flanking mar 7.21 2 1016 12 070049 Dirofilaria immitis p 1.97	2 1045 30 T43938 Sequence flanking mar 1.97 1045 30 T72058 Sequence flanking mar 1.97	2 1050 30 T43927 Sequence around marke 7.21 2 1050 30 T72047 Sequence around marke 7.21	2 1091 60 X13502 Enterococcus faecalis 7.21 2 1139 1 N90255 Interleukin-6.	2 1139 1 N80299 Interleukin 6. 7.21 2 1166 30 T43941 Sequence flanking mar 7.21	2 1166 30 172061 Sequence flanking mar 7.21	2 1194 2 N70395 Sequence encoding rat 7.21	2 1199 6 036051 Human nov gene promot 1:97 2 1215 28 T58339 Tobacco epi-5-aristol 7:21	2 1217 3 N40211 DNA sequence encoding 1.97 c 1231 38 T95755 Arabidopsis SCARECROW 7.21	2 1245 7 041102 HME1.	2 1245 44 V356U/ Human mammary epicate 7.21 2 1249 1 Q06091 Murine cellular enhan 7.21	.2 1249 1 Q06091 Murine cellular enhan 7.21 .2 1257 2 N70394 Sequence encoding hum 7.21	2 1260 30 T72049 Sequence around marke 7.21e+ 2 1260 30 T43929 Sequence around marke 7.21e+
0.2 500 60 X13700 Entercoccus facealis 7.21e+01 0.2 502 7 Q46914 Human Kunitz-type pro 1.97e+01 0.2 508 53 V69714 3' portion of intron 7.21e+01 0.2 543 16 085537 Entercoccus facealis 7.21e+01 0.2 545 30 743932 Sequence flanking mar 1.97e+01 0.2 545 30 712052 Sequence flanking mar 1.97e+01 0.2 545 30 V6158 Tumour suppression ge 7.21e+01 0.2 557 38 V6158 Fragment of plasmid p 1.97e+01	0.2 560 1 Q06235 Bovine male-specific 1.97e+01 0.2 571 28 T33598 Mouse Fibrosin CDNA. 7.21e+01 0.2 571 28 T61383 Mouse Fibrosin CDNA. 7.21e+01 0.2 585 43 V28925 Bison Nramp1 DNA SEQ 1.97e+01	0.2 587 43 V28928 Bison Nrampt DNA SEQ 1.97e+01 0.2 592 16 Q85520 DNA probe 26 detects 1.97e+01 0.2 594 53 V88419 EST clone EK634, 7.21e+01	0.2 597 16 092942 Natural resistance—as v.iletvu 0.2 600 30 743950 Sequence flanking mar 1.97e+01 0.2 605 30 T72055 Sequence flanking mar 7.21e+01	0.2 605 30 T43935 Sequence flanking mar 7.21e+01 0.2 637 22 T18874 Human survival motor 7.21e+01	0.2 672 30 T43948 Sequence flanking mar 7.21e+01 0.2 688 30 T72060 Sequence flanking mar 7.21e+01	0.2 688 30 143940 Sequence Lianking mar 7.21e+01 0.2 698 38 V06140 Viral infection gene 1.97e+01	0.2 704 49 V61632 Human TACE-11ke DNA: 7.21	0.2 705 30 T43937 Sequence flanking mar 1.97 0.2 724 30 T72064 Sequence flanking mar 1.97	0.2 724 30 T43944 Sequence flanking mar 1.97 0.2 751 30 T43931 Sequence flanking mar 7.21	0.2 751 30 172051 Sequence flanking mar 7.21 0.2 761 19 Q98920 TGF-beta inducible re 1.97	9 0.2 766 52 V65399 Promoter sequence of 1.37 0.2 780 30 143181 5.ALT DNA sequence co 7.21 0.22 0.22 0.22 0.22 0.22 0.22 0.22 0	3 0.2 818 1/ 101034 Mouse b/-1 excus (C7 17) 3 0.2 829 42 V29366 Calcium ion channel a 7.21	3 0.2 835 38 V06122 V1fal Infection gene 7.2. 9 0.2 848 2 Q13632 GBMT modified transcr 1.97	3 0.2 875 49 V58364 Coding sequence for 8 7.21 8 0.2 875 49 V58364 Toding sequence for 8 7.21 8 0.2 875 22 T14630 Tie receptor tyrosine 7.21	8 0.2 884 38 V06156 Tumour suppression ge 7.21 8 0.2 970 55 V08841 Gene No. 31 encoding 7.21	0.2 972 30 T68932 Bovine PIT-1 exon 6 s 7.21	0.2 1000 30 T43942 Sequence flanking mar 7.21 0.2 1016 12 Q70049 Dirofilaria immitis P 1.97	0.2 1045 30 143938 Sequence flanking mar 1.97 0.2 1045 30 172058 Sequence flanking mar 1.97	0.2 1050 30 T43927 Sequence around marke 7.21 0.2 1050 30 T72047 Sequence around marke 7.21	0.2 1091 60 X13502 Enterococcus faecalis 7.21 0.2 1139 1 N90255 Interleukin-6.	0.2 1139 1 N80299 Interleukin 6. 7.21 0.2 1166 30 743941 Sequence flanking mar 7.21	0.2 1166 30 172061 Sequence flanking mar 7.21	0.2 11/6 2 010063 BOYING 1 Special Cod 1.2 0.2 1194 2 N70395 Sequence encoding rat 7.21	0.2 1199 6 036051 Human nov gene promot 1.97 0.2 1215 28 T58339 Tobacco epi-5-aristol 7.21	0.2 1217 3 N40211 DNA sequence encoding 1.97	0.2 1245 7 041102 HME1. T.21	0.2 1245 44 V356U/ Human mammary epither 7.21 0.2 1249 1 Q06091 Murine cellular enhan 7.21	0.2 1249 1 Q06091 Murine cellular enhan 7.21 0.2 1257 2 N70394 Sequence encoding hum 7.21	0.2 1260 30 T72049 Sequence around marke 7.21e+ 0.2 1260 30 T43929 Sequence around marke 7.21e+
13700 Entercoccus faccalis 7.21e-01 246914 Human Kunitz-type pro 1.97e-01 669714 3' portion of intron 7.21e-01 613917 Entercoccus faccalis 7.21e-01 613917 DNA probe 43 detects 1.97e-01 643932 Sequence flanking mar 1.97e-01 670555 Sequence flanking mar 1.97e-01 6706558 Fragment of plasmid p 1.97e-01	19 0.2 560 1 Q06235 Bovine male-specific 1.97e+01 18 0.2 571 28 T33598 Mouse Fibrosin CDNA. 7.21e+01 18 0.2 571 28 T61383 Mouse Fibrosin CDNA. 7.21e+01 19 0.2 571 28 T61383 Bison Nramp1 DNA SEQ 1.97e+01	19 0.2 587 43 V28928 Bison Nrampi DNA 550 1.97e+01 19 0.2 592 16 085520 DNA probe 26 detects 1.97e+01 18 0.2 594 53 V88419 EST clone EK634. 7.21e+01	18 0.2 597 16 022942 Natural resistance-as /_let-ul 19 0.2 600 30 743950 Sequence flanking mar 1.97e+01 18 0.2 605 30 772055 Sequence flanking mar 7.21e+01	18 0.2 605 30 T43935 Sequence flanking mar 7.21e+01 18 0.2 637 22 T18874 Human survival motor 7.21e+01	18 0.2 672 30 T43948 Sequence flanking mar 7.21e+01 18 0.2 688 30 T72060 Sequence flanking mar 7.21e+01	18 0.2 688 30 T43940 Sequence Ilanking Mar 7.218-01 19 0.2 698 38 V06140 Viral infection gene 1.97e+01	18 0.2 704 49 V61632 Human TACE-11ke DNA: 7.21 19 0.2 705 30 T72057 Sequence flanking mar 1.97	19 0.2 705 30 T43937 Sequence flanking mar 1.97 19 0.2 724 30 T72064 Sequence flanking mar 1.97	19 0.2 724 30 T43944 Sequence flanking mar 1.97 18 0.2 751 30 T43931 Sequence flanking mar 7.21	18 0.2 751 30 172051 Sequence flanking mar 7.21 19 0.2 761 19 Q98920 TGF-beta inducible re 1.97	19 0.2 766 52 V65399 Promoter sequence of 1.37 180 30 T43181 5.ALT DNA sequence co 7.21 18 0.2 780 30 T43181 5.ALT DNA sequence co 7.21	19 0.2 818 1/ 101034 mouse b/ 1 excus o (~7 ii/). 18 0.2 829 42 V29366 Calcium ion channel a 7.21	18 0.2 835 38 V06122 VITAL INTECLUM Gene 7.22 19 0.2 848 2 013632 GBMT modified transcr 1.97	18 0.2 875 49 958864 Coding sequence for 8 7.21 18 0.2 875 49 958864 Coding sequence for 8 7.21 18 0.2 875 875 714630 Tie receptor tyrosine 7.21	18 0.2 884 38 V06156 Tumour suppression ge 7.21	18 0.2 972 30 168932 Bovine PIT-1 exon 6 s 7.21	18 0.2 1000 30 T43942 Sequence flanking mar 7.21 19 0.2 1016 12 Q70049 Dirofilaria immitis P 1.97	19 0.2 1045 30 T43938 Sequence flanking mar 1.97	18 0.2 1050 30 T43927 Sequence around marke 7.21 18 0.2 1050 30 T72047 Sequence around marke 7.21	18 0.2 1091 60 X13502 Enterococcus faecalis 7.21 18 0.2 1139 1 N90255 Interleukin-6. 7.21	18 0.2 1139 1 N80299 Interleukin 6. 7.21	18 0.2 1166 30 172061 Sequence flanking mar 7.21	19 0.2 11/6 2 010003 Bovine 1 specific 3c4 2.72 18 0.2 1194 2 N70395 Sequence encoding rat 7.21	19 0.2 1199 6 Q36051 Human nov gene promot 1:97 18 0.2 1215 28 T58339 Tobacco epi-5-aristol 7:21	19 0.2 1217 3 N40211 DNA sequence encoding 1.97	18 0.2 1245 7 041102 HME1.	18 0.2 1245 44 V3560/ Human mammary epicher 7.21 18 0.2 1249 1 Q06091 Murine cellular enhan 7.21	18 0.2 1249 1 Q06091 Murine cellular enhan 7.21 18 0.2 1257 2 N70394 Sequence encoding hum 7.21	18 0.2 1260 30 T72049 Sequence around marke 7.21e+ 18 0.2 1260 30 I43929 Sequence around marke 7.21e+

υ

υ

00 000

00 0 00000000 00000000000000000

υυυυυ υ

υ υ υ

υυυ

00 00 00

0000 000 0000000 00000

	21e+01 21e+01 21e+01 97e+01	37e+01	1e+01 1e+01	1e+01 1e+01	21e+01 21e+01	1e+01 7e+01	7e+01 7e+01	7e+01	1e+01	7e+01	/e+01 7e+01	1e+01 1e+01	1e+01 1e+01	1e+01 1e+01	7e+01	1e+01	1e+01	le+01	le+01 le+01	le+01 le+01	/e+01 /e+01	e+01	e+01	e+01 e+01	e+01 e+01	e+01	e+01 e+01	e+01 e+01	e+01	e+01 e+01	e+01 e+01	e+01	e+01	e+01
नंनंनंनंनंनं,					7.	7.	<del>.</del> ; ;	1.			iä	۲.	7.21	7.	1.9		7.21		2.2	7.21	ο, ο,	· -		• • •	9.2	9.	26	1.97	7.21	7.21	7.21	1.976	97	21
morphogeni uman MP52. ing human p ng human TG cDNA. ng human MP	Murine C140 receptor Murine C140 receptor Rabbit protein-couple Barley alpha-qlucosid	g mar	eptor	r cell activator	nomic	Delta cDNA D11. Human homeoprotein re	syn	eptor	pc5	pro	lene.	Rattus norvegicus NRL Murine AGP-1 encoding	gen	or g enco	pro	SSOC	ania antigen MI	T SOA		in f	rive e.	aphy	naci	11/	ng s epto	gen	top	atin atin	epi	INS-	odin	De De	¥.	ssocia
morphoge uman MP5; ng human ng human cDNA. ig human ifferent:	rece rece sin-c	nkin	recon	activactiv	b ger	11. rote	ronar	rece	herir	genic	NA.	gicus encc	errin -like	ecept	oding lex a	lex a	atige	роту је.	Human TB2 cDNA.	gene	a-de gen	ing a Sta coding s	ave	eukin	codil	EPCR	i pro	umula umula	ruzi	DNA ]	ogene	Anthirrhinum majus D Mouse tumour necrosi	8 '	ω,
A for human later to the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of	C140 C140 Prote	e fla	rogen 75 CE	cell cell	2.9 k ytoki	DNA D	hyalu ngth	resi	cocad	steo	na cD	orve MGP-1	ctor	oid roseque	comp.	comp	ia ai	ger ger	2 der	DP1 ç a ger	hepatoma-de fsh15w6 gen	ding	oding	nterl	/3 <u>_</u> 3 turin	ulus	ardti	n-acc n-acc	oma c	fied	sence eroid	Lnum	ir ne	Kidney injury
Human b CDNA fo CDNA en DNA enc Human M DNA enc 200 gen	rine rine obit	quenc	and ck p	ler	que lan c	ta ci	ine l	tami	prot	ine	-gam	tus r ine A	se is gluc	opic omic	uence an t-	an t- shman	shman	an TB	an TB	Encodes DP1 CD22-beta ga	an he an fs	DNA encoding Inulinase cod	A enc	ine i	neur	musc	einh	hyru hyru	anose	modi	cDNA sequence enco Human steroidogeno	irrhi e tun	tumor	еу 11
Hume CDNP CDNP DNA Hume DNA 200	Mu Rah Ban	Sec	Rat	Kil	Han I	Del Hun	Mur	His	Rat	Mur	PKC	Rat	Rat	Rat Gen	Sequen Human	Human Leishr	Lei	Hum	Hamis	Ence CD2;	Human Human	DNA [nu]	CDNZ	Murine interleukin-17 7	Cione AV/3_3 coding s Rat neurturin recepto	Mus		Porp	Trypanosoma cruzi epi	AGE-	CDNA Huma	Anth Mous	Rat	KIGH
7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	038 893 736	936 )56 17	511	507	270 883	24	40	71	174	41	99	4 4 6	85	15 63	36 61	61 35	35	4.0	v & r	46.5	33 93	11 75	24	100	5.0	æ c	1001	- 5	0,5	200	nω	ωo	æ -	4
109/29 109/29 108/19 108/19 108/19 108/19 108/19 108/19	T32	T43	T47	V83	D752	T511	V188	Q425 Q871	T035	T116	0388	V152	0489	Q510 N710	N803 Q392	Q392 T621	0723	T961	V564	0387	T4/5	T840	T0602	T338(	V5800	V1960 N8089	V4629	T6096	T2731	05707	13948 13948	V4204 N9022	Q0532 V8059	1000
220000000000000000000000000000000000000	4 2 3 2 4	300	15	57	13	ဂဓ္ဗ	370	15	220	2 %	ν.	201	- ω	60	7	0 /	80 0	7	o o -	4 0	٠ <del></del> ر	~ <del>-</del>	<b>~</b> 4	, w r	· os ·	4 0	100	റത	m <b>↔</b>		- m	~	_ ~	
2703 2703 2703 2703 2703 2712																																		
0000000	0000	000	0.5	000	700	900	200	000	0.0	0.5	000	900	0.0	000	0.0	0.5	0.5	0.0	7.7.	200	200	0.5	7.7	0.0	77.	7 7	0.0	777	00	7.0	0.5	0.0	0.5	1
00000000																																		
C 741 C 742 C 7443 C 7444 C 745 C 746	47	75	c 75 c 75	0 75 27 75	c 75 27	C 76.	C 76.		0 2 0	768	77(							783	785	787	789	791	792	794	796	798	799	801	803	804	806	808	810	1 1
					-	•				Ŭ		0	•	υ		OO	O				O		υυ	υ			Ü	000	ပ	Ö			O	,
444444	21e+01 21e+01 21e+01	1 d t	1e+01 1e+01	1e+01 1e+01 1e+01		7e+01 1e+01	1e+01	10-	1e+01	le+01 le+01	1e+01 7e+01	1e+01 1e+01	1e+01	1e+01	1e+01	7e+01	le+01 le+01	le+01 1e+01	le+01 e+01	e+01	e+01	e+01	e+01	'e+01 :e+01	e+01 e+01	e+01	e+01 e+01	e+01	e+01	e+01 e+01	t t	e+01	e+01	
	~~~~		0 0 4 6 6 6 6 6 6			~; ·			٠.,	٠	_ :	7.21	٠.	• . • . •	٠.٠			• • •	4		7.21	7.21	1.6.	1.97	7.21	7.21	7.21 7.21	1.97	7.21	7.21	1.97	1.97	7.21	,
Protease Nexin-1 type Sequence of coding re PN-1 beta analogue, p PN-1 beta analogue, p Hunan secreted protei Mouse SNAP-25 polypep	mal-a: ng ma: oteina	e tiss	ance or	ylycar ding n	ykini	scepto	ase g	GDNFF	prote	codin	DNA.	rece	s tu lypen	rotei	2.3k	socia	serec prote	ot lE chime	chime ipati	protei NA.	CDNA	enhan	d amp	Human cocaine and amp Rabbit GnT I cDNA clo	1/PAC		inhi	1, 2 beta	prote	VS27	Rat cryptdin 3 gene. Fragment from clone e	reinhardtii protop	B-pe	4
exin- f cod analo analo analo eted	ptoso lanki llopr	ectiv	sedu	Veuro enco	otac	rin re	amy.	ng a	ated	iry as lp1 er	n-1 ogeni	amine morph	Wilm ur pc	ted p	oniae	ry as	ated	ence ng a	ng a artic	ted p			ne an	ne an C CDN	n GHR Nemia	7	crone	xons	lipo	luitii ed pi	3 96	ii pi	ened	urfac
ase N nce o beta beta beta secr secr	syna nce f meta	conn	tive otide TIGR	GP22	prep	Activisis:	tumor	ion	SSOCI	Nran	decti	B dog bone	ce of tumo	secre	pneum	inju	ssoci	segu ncodi	ncodi sis p	secreted	inter	1 ymphoid	cocai	GnT	itfis leuka	£	e Lirk cione e leukaemia	17-1 e	apc,	ecret	ptdir t fro	hardt	short	phage surface
Prote Seque PN-I PN-I PN-I Human	Mouse Segue: Kuman Kuman	luman	Jucled Tuman	at bi	louse luman	louse poptc	equen	DNA e	D40 a	ovine	ouse urine	at Dl ouse	equen ilms'	uman rabid	. hyo	idney	MP1 a	ONA e	ONA el popto:	Human : Rat bio	Human interleukin-11 Arabidopsis HY4 cDNA	Murine lymphoid	man	man bbit	ai ca Tine	IF-R	Murine	use E Man a	man 3	man s	t cry agmen	rein	• •	C
																																		Ma
Q89925 1 N81282 3 Q22587 3 Q22586 3 Q22585 1 V34207 1 V57558	13949 13123 13123	4226	2028	6264	2619	6641 8232	8510 7441	9330 4048	0773	9868	1640	5148	2020	4322	9695 3575	3604	1273	870	336	1776 1768	306	106	982	0 0 0 0 0 4 0	941	800	271	040 500	531	484	738 168	297 766	977	101
14 www 250	0008	4 8 A	4 V3 V5 V5	3 T8	2 V3	1 06 4 T3	3 0 0 0 0	0 4 0 8 0	6 T3	X 42	114	96	45	7 A 3 A	0 V 0	7 78	T31	6 E	129	T08	T33	T67	T45	025	055	025	092	T01 V23	T31	V61	T30 N81	V46 V65	T08	7 7 7
2031 15 2031 1 2032 3 2032 3 2032 3 2033 5 2040 50	040 040 057 075 2	075 4 075 1	085 4	107 3	116 4 136 5	160 1 166 2	182 186 5	215 6 220 1	263 5	271 4	299 1	310	312 4	315 5: 319 5:	334 33	349 57 352 30	59 25	03 36	33 23	36 51 46 17	56 22 58 17	60 30 63 3	83 30	85 4	92 13 97 10	98	98 16	16 1/ 18 42	29 21 29 35	47 51	$\frac{51}{71}$ $\frac{22}{1}$	73 46 14 52	52 20	10 40
,,,,,,,,,,																																		
0000000	0000	000		000	000		000	00		00		000		00	00	000	00	000	200	77.	200	0.0	0.0	000	0.0	0.0	0.0	0.0	0.0	0.00	. 7 7	00	0.0	
7 H H H H H H H H H H H H H H H H H H H	1888	18 18 18	18	188	119	52.5	138	5 6 6	18	18	119	188	18	188	18	18	18	18	1 1 5	13	8 R	18	19	8 6	281	18	8 6	187	18 18	18	18	18	18	2
669 670 671 673 674	776	80 81	833	8 8 4 2 5 4	6 8 9 7 9 9	0 00 0	910	2 6 6	94 95	96 97	8 6	000	120	200	20 20 20) 8 38	6.0	٦°	<u></u>	i Fig.	9 17 (ဆတ	<u> </u>	9 6) 4 (ņφ	~ α		0-1	(7) (1)	. .	ഗവ	~ œ	
		o o	o o o	φφά			ວ ບ ບ	أضاء	တ တ်	ဖ ဖ	io i	, ~ ,	· ~ i	< × ;	< ~ ;	2 %	7,7	22		:2:	17:	71	72	27	22	72	72	72	73	73	35	733	738	: ;

21e+01 21e+01 21e+01 21e+01 97e+01 97e+01 21e+01 7.21e+01 1.97e+01 1.97e+01 1.97e+01 7.21e+01 7.21e+01 7.21e+01 1.97e+01 1.97e+01 1.97e+01 1.97e+01 1.97e+01 1.97e+01 7.21e+01 7.21e+01 7.21e+01 21e+01 21e+01 21e+01 21e+01 97e+01 21e+01 97e+01 21e+01 21e+01 Nucleotide sequence or plasmid phadneo int us human IL-4 gene.

Rat cholesterol 7-alp Rat cholesterol 7 alp Rat cholesterol 7 alp Rat cholesterol 7-alp Rat cholesterol 8-alpha 6-alpha uman interferon-gamm Chinook salmon growth Human TIGR upstream r HindIII fragment of P SM22 protein gene nuc Tobacco leaf antifung 6.5 kb BanHI fragmant Osteogenic protein ho Arylamine N-acetyl tr Arylamine N-acetyl-tr Arylamine N-acetyl-tr Nevoid basal cell car Entercoccus faecalis Murine IL-5 cDNA geno Rhodopsin gene Human YAP CDNA.
Human XIAP coding seq
DNA encoding inositol
P. chrysogenum beta-N
Human TIGR promoter m
Human TIGR promoter m
Human TIGR promoter m
Human TIGR promoter m
Human TIGR promoter m
Human TIGR promoter m
Human TIGR promoter m
Human TIGR promoter m
Furan Human FCERI beta chai Sequence of human mus CDNA encoding rat cyt

```
.21e+01
.21e+01
.21e+01
.21e+01
.21e+01
                                                                                                  97e+01
97e+01
97e+01
                                                                                .97e+01
                                                                                                                           .21e+01
.21e+01
.21e+01
                                                                                                                                                                                                                                                                                                                                 21e+01
 CDNA encoding rat cyt Human cathegain K gen Polycystic kidney dis Polycystic kidney dis Mus musculus dystroph Human PKD1 cDNA. Polycystic kidney dis
                                                             Mouse butyrophilin ge
Mouse butyrophilin ge
Human cathepsin K gen
CEA genomic clone.
PKS 741 insert contg.
PKS 741 insert contg.
Nucleotide sequence e
Human box-dependent m
Human Binl gene.
Carcinoembryonic anti
                                                                                                                                                                                                              Syndecan gene.
Mouse syndecan gene s
Mouse syndecan gene s
Mouse poly Ig recepto
Calpain large subunit
Recombinant daenoviru
Recombinant denoviru
Recombinant cls-actin
Human C-fms oncogene.
MAGE-B cluster DNA se
Insert from cosmid 10
Human PKD1 gene.
Human PKD1 locus betw
NC-contig derived fro
Hcreditary haemochrom
Hereditary haemochrom
                                                                                                                                                   DNA encoding Factor-V
Bacterial artificial
Shuttle vector pAdbel
Staphylococcus aureus
Human flavin containi
Mouse syndecan-I gene
Mouse syndecan-I enco
                                                                                                                                                                                                                                                                                                                                                                                                               17-DEC-1996 (first entry)
Nematode Ced-3 gene.
Ced-3; interleukin-1 beta converting enzyme; ICE; protease;
cell death; apoliss; neural degeneration; inflammation;
antiinflammatory; ds.
Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "causes L27F mutation"
2367..2429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /codon_start= 2232..2234
                                                                                                                                                                                                                                                                                                                                                                          ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
1356..1472
                         Q91438
V18885
T94102
T13821
V05159
V05159
Q90511
Q20685
                                                                                                                         T43574
V15693
                                                                                                                                                                                                                                                                                   T80043
T94101
T18551
T94108
V83940
                                                                                                                                            V52967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= a
/label= Repeat-1
1490.1614
/*tag= b
/label= Repeat-2
2167.2366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= e
/label= Intron-1
2430..2575
/*tag= f
2487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /label= T(n1040)
                                                                                                                                                                                                                                                                                                                                                                                               T38196 standard; DNA; 7653 BP. T38196;
                                                           14180 41
14180 41
14537 39
14704 3
14704 3
14855 50
14985 25
                                                                                                                               14985 40
15056 50
15155 3
18073 59
                                                                                                                                                 ъ
13011
13674
13807
13807
13815
14060
14148
14180
                                                                                                                                                                                                                                                                                  53526
53527
53577
63577
80240
80595
235033
237326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          allele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 exon
                                                                                                                                                                                                                                                                                                                                                                                        RESULT
```

allele

exon

```
/label= T(n1165)
                                                                                                                                                                                                                                                                                                                                                                                          /note= "creates premature stop codon at 412"
5372
                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag= ad
/label= T(n2430)
/note= "causes A466V mutation"
6535
/*tag= g
/label= A(n718)
/note= "causes G65R mutation"
2576..2853
                                                                                                                                                                                                                                                /label= A(n2433)
/note= "causes G360S mutation"
                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= ac
/label= T(n1129,n1164)
/note= "causes A449V mutation"
6485
                         /*tag= h
/label= Intron-2
2854..3107
                                                                                                                   /*tag= m
/label= Repeat-2
3782..4070
/*tag= n
/label= Repeat-2
                                                                                                                                                                                                         /*tag= r
/label= Repeat-3
5546..5760
                                                            /*tag= j
/label= Intron-3
                                                                             /*tag= k
/label= Repeat-1
3329..3396
                                                                                                  /*tag= 1
/label= Repeat-1
3487..3759
                                                                                                                                                                                        *tag= q
label= Repeat-3
                                                                                                                                                                      *tag= p
label= Intron-4
                                                                                                                                                                                                                                                                    *tag= u
label= Intron-5
                                                                                                                                                                                                                                                                                                                            /*tag= x
/label= Intron-6
6062..6138
                                                                                                                                                                                                                                                                                                                                               /*tag= y
/label= Repeat-4
/298..6537
                                                                                                                                                                                                                                                                                                                                                                               /*tag= aa
/label= T(n1949)
                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= ab
/label= A(n1286)
5434
                                                                                                                                                  4303..4633
/*tag= 0
4634..5546
                                                                      3126..3243
                                                   3108..4302
                                                                                                                                                                                  688..4719
                                                                                                                                                                                                    221..5330
                                                                                                                                                                                                                                                             ...5814
                                                                                                                                                                                                                                                                              1815..5942
                                                                                                                                                                                                                                                                                                                     943..6297
                                                                                                                                                                                                                               *tag= s
                                                                                                                                                                                                                                                                                                    *tag= w
                                                           /*tag=
                                                                                                                                                                                                                                                                                       *tag=
                                              /*tag=
                                                                                                                                                                                                                                                                                                                                                                  /*tag=
6322
                                                                      repeat_unit
                                                                                          repeat_unit
                                                                                                                               repeat_unit
                                                                                                             repeat_unit
                                                                                                                                                                                  repeat_unit
                                                                                                                                                                                                     repeat_unit
                                                                                                                                                                                                                                                                                                                                        repeat_unit
                    intron
                                                   intron
                                                                                                                                                               intron
                                                                                                                                                                                                                                   allele
                                                                                                                                                                                                                                                             intron
                                                                                                                                                                                                                                                                                            allele
                                                                                                                                                                                                                                                                                                                      intron
                                                                                                                                                                                                                                                                                                                                                                       allele
                                      exon
                                                                                                                                                                                                                                                                                                                                                                                                allele
                                                                                                                                                                                                                                                                                                                                                                                                                   allele
                                                                                                                                                                                                                                                                                                                                                                                                                                             allele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     allele
                                                                                                                                                  exon
                                                                                                                                                                                                                        exon
                                                                                                                                                                                                                                                                                exon
                                                                                                                                                                                                                                                                                                                                                            exon
```

```
1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1261
                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1081
                                               421
                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Óγ
                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                       δλ
                                             g
                                                                         ò
                                                                                                  g
                                                                                                                           QΥ
                                                                                                                                                    g
                                                                                                                                                                              δ
                                                                                                                                                                                                       d
                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                       Óλ
                                                                                                                                                                                                                                                                                                                                          οχ
                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ttttctttgttctttttgttgaacgtgttgctaagcaattattacatcaattgaagaaaa 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gttcgaacattcgtgtgtgtgtccttttccgttatcttgcagtcatctttgtcgttt 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ttgtcgaattaatatccctattatcactttttcatgctcatcctcgagcggcacgtcctc 180
                                                                                                                                                                                                                                                                                                                                                                               Claim 18; Fig 3; 139pp; English.

Claim 18; Fig 3; 139pp; English.

The Caenorhabditis elegans ced-3 gene (T38196) was cloned by mapping RELPs and chromosome walking, and genomic DNA cloned in plasmid py107 was sequenced. EMS-induced alleles were also sequenced. The gene codes for a cell death protein (R98754) that is structurally similar to human interleukin-1 beta converting ceryme (ICE) (R98755), suggesting that Ced-3 protein may be a cysteine protease like ICE and that ICE may be a human equivalent of the nematode cell death gene. The ced-3 gene can be used as a protein or in the prodn. of Ced-3 protein and novel druys for enhancing or inhibiting the activity of ICE, ced-3 and related genes for the treatment of inflammatory diseases and/or diseases canson of the ced-3 gene can hibitors of ced-3 activity include portions of the ced-3 gene and it product.

Sequence 7653 BP; 2429 A; 1456 C; 1270 G; 2498 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 tttagcacaattaatcttgtttcagaaaaagtccagttttctagattttccgtctta 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITAGCACAATTAATCTTGTTTCAGAAAAAGTCCAGTTTTCTAGATTTTTCCGTCTTA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 agatotgaaataaggtgataataaattaagtgtatttotgaggaaatttgactgt 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 AGATCTGAAATAAGGTGATAAATTAATAAATTAAGTGTATTTCTGAGGAAATTTGACTGT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels 0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241 GTTCGAACATTCGTGTGTTGTGCTCCTTTTCCGTTATCTTGCAGTCATCTTTGTCGTTT
                                                                                                                                                                                                                                                                                                                                             Ced-3 and human interleukin 1-beta convertase genes and proteins useful to treat inflammation and diseases characterised by cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99.6%; Score 7622; DB 24; Length 7653; 100.0%; Pred. No. 0.00e+00;
                                                                                                                                                                     codon at 7073-7075"
                                                                                                                                                                                               /*tag= aj
/label= T(n1163)
/note= "causes S486F mutation"
/label= A(n2426)
/note= "causes E483K mutation"
6538..7012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 100.0%; Pred. No.
                                                                                                                                                                      /note= "in-frame stop
                                                                                                                                                                                                                                                                                           (MASI ) MASSACHUSETTS INST TECHNOLOGY
                                        /*tag= af
/label= Intron-7
                                                                               /*tag= ag
/label= Repeat-5
                                                                                                                                 Repeat-5
                                                                                                                                                                                                                                                                                                       Shaham S, Yuan J;
                                                              6567..6625
                                                                                                                     /*tag= ah
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7652; Conservative
                                                                                                      ..6965
                                                                                                                                            7013..7653
                                                                                                                               /label=
                                                                                                                                                                                                                                                                23-FEB-1996; U02473.
24-FEB-1995; US-394189.
                                                                                                                                                           /*tag=
                                                                                                                                                                                                                                                                                                                  96-425082/42.
                                                                                                                                                                                                                                                                                                                                P-PSDB; R98754
                                                                                                                                                                                                                                       WO9625946-A1
                                                                                                                                                                                                                                                                                                          Horvitz HR,
                                                                                                                                                                                                                                                     29-AUG-1996.
                                                                                                        repeat_unit
                                                                  repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                              intron
                                                                                                                                                                                     allele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                          death
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

```
aacatatttgacggcaaaatatctcgtagcgaaaactacagtaattctttaaatgactac 1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tttttttccgcgaaatttgcaataaaccggccaaaactttctccaaattgttacgcaa 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           atttatogtaaaattatoataatagoacogaaaactactaaaaaatggtaaaagotoottt 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1261 ATTTATCGTAAAATTATCATAATAGCACCGAAAACTACTAAAAAATGGTAAAAAGCTCCTTT 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              taaatoggctogacattatogtattaaggaatoacaaaattotgagaatgogtactgogc 1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gtcgtccttggtatcctcaacttgtcccggttttcttttcggtacactcttccgtgatgc 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  aatccaaatcgcattatatttgtgcatggaggcaaatgacggggttggaatcttagatga 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gatcaggagetttcaggggtaaacgeceggttcattttgtaceacatttcatcattttect 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tagtttactaataaaactacttttaaacctttacctttacctcaccgctccgtgttcatg 540
                                                                                                                                                                                                                                          accactecateacetetttggeggtgttettegaaaeeceaettaggaaageagtgtgtat 720
                                                                                                                                                                                                                                                                                                                                                                                                          661 ACCACTCCATCACCTCTTTGGCGGTGTTCTTCGAAACCCACTTAGGAAAGCAGTGTGTAT 720
                                                                   ttaaccttggtttttgcattgtttcgtttaaaaaaaccactgtttatgtgaaaaacgat 480
                                                                                                       TITAACCITGGTTTTTGCATTGTTTCGTTTAAAAAACCACTGTTTATGTGAAAAACGAT 480
                 1081 TITITITICCGCGAAATTIGCAATAAACCGGCCAAAAACTITCICCAAATIGITACGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1141 TATATACAATCCATAAGAATATCTTCTCAATGTTTATGATTTCTTCGCAGCACTTTCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1141 tatatacaatccataagaatatcttctcaatgtttatgatttcttcgcagcactttctct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TAAATCGGCTCGACATTATCGTATTAAGGAATCACAAAATTCTGAGAATGCGTACTGCGC
                                                                                                                                                                gotcatagattttcgatactcaaatccaaaataaatttacgagggcaattaatgtgaaa
361 ggctcgccgatttattgttgccagaaagattctgagattctcgaagtcgattttataata
```

1500 1500 1560 1560	1620 1680 1680 1740	74 74 80 80	1860 1860 1920 1920	1980 1980 2040	2040 2100 2100	2160 2160 2220 2220	8 8 4 4	0 0 0	2 2 2 2 2 2 2 3
tgtagcgcttgtgtcgatttacgggctc	CTACGAGATATTTTGCGCGCCAAATATGACTGTAATACGCATTCTCTGAATTTTGTGT ccgtaataatttcacaagattttggcattccactttaaaggcgcacaggatttattcc 	AIGGTCTCGGCACGCAAAAGTTTGATAGATTTAAATTCTCCTTGCATTTTAATT aattactaaaatttcgtgaattttctgttaaaatttttaaaatcagttttctaatat	. ticcaggitgacaacagaaacagaaacacaacaacaatittaaaatcagttttcaaat 	gattcaaaacaatttaacaaaaaaaacccaaaattcgccagaaatcaagataaaaa 	TICAAGAGGICAAAATTITCCGITTI gcagttgttggagttttgacgaaact 	agctgaattttgaggacaatgtttaaaaaaaacactattttccaataatttcactcat 1011111111111111111111111111111111111	oagccgaagatgatgcgtcaagatagaaggagcttgctagagagg 	gagatatgattaatgtgagtttttaatcgaataataattttaaaaaa: 	atcgtgaaagcagtgcaacgacgggagatgtggcgttcgacgcgttttatgatgct
50 50	0 0 0 0	8 4 4		1921 1921 1981	98	2101 2101 2161 2161	2221 2221 2281 2281	2341 2341 2401 2401	2461 2461 2521
9 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	3 8 6 8	og og	0, bb 0, b	Oy Oy	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	oy Oy	6 6 6 6 6 6 6	qa oʻ	do vy

```
2700
                                               2700
                                                          2760
                                                                              2820
                                                                                         2820
                                                                                                   2880
                                                                                                             2880
                                                                                                                       2940
                                                                                                                                 2940
                                                                                                                                                                3060
                                                                                                                                           3000
                                                                                                                                                   TTCACCGACCCGAGTTCACCGTGACAGCGTCTTCAGTGTCATCATTCACTTCTTATCA 3000
                                                                                                                                                                                    3120
                                                                                                                                                                                              3120
                                                                                                                                                                                                         3180
                                                                                                                                                                                                                   3180
                                                                                                                                                                                                                             3240
                                                                                                                                                                                                                                                  3300
                                                                                                                                                                                                                                                            3300
                                                                                                                                                                                                                                                                      3360
                                                                                                                                                                                                                                                                                          3420
                                                                                                                                                                                                                                                                                                                                    3540
                                                                                                                                                                                                                                                                                                     3420
                                                                                                                                                                                                                                                                                                               3480
                                                                                                                                                                                                                                                                                                                          3480
                                                                                                                                                                                                                                                                                                                                                        3600
                                                                                                                                                                                                                                                                                                                                                                   3600
                                                                                                                                                                                                                                                                                                                                                                           tcatgtggtttgttcatatgaatgacgaaaaatagcaattttttatatattttcccctat 3660
                                                       ttttaaagttcggcgcaaagcaagggtctcacggaaaaagaggcggatcgtaattt
                                                                                                ttcaccgacccgagttcaccgtgacagcgtctcttcagtgtcatcattcacttcttatca
                                                                                                                                                              gtgtccaatgtcaccggcaagccatcgtcggagccgcgcattgagccccgccggctacac
                                                                                                                                                                                   acacaattattcatctcctccagtcaacgcatttcccagccaaccttgtatgttgatgcg
                                                                                                                                                                                        gaaaaatacagtaaccctttaaatgactattgtagtgtcgatttacgggctcgattttcg
                                                                                                                                                                                                                                                                                                                                  tttttttcattcaagatatgcttattaacacatataattatcattaatgtgaatttcttg
                                                                                                                                                                                                                                                                                                                                       tagaaattttgggcttttcgttctagtatgctctacttttgaaattgctcaacgaaaaa
                                                                                                                                                                                                                                                                                                                                                            2641
               2581
                         2581
    2521
                                   2641
                                                                            2761
                                                                                      2761
                                                                                                2821
                                                                                                           2821
                                                                                                                               2881
                                                                                                                                          2941
                                                                                                                                                    2941
                                                                                                                                                                        3001
                                                                                                                                                                                             3061
                                                                                                                     2881
                                                                                                                                                              3001
                                                                                                                                                                                  3061
                                                                                                                                                                                                       3121
                                                                                                                                                                                                                 3121
                                                                                                                                                                                                                            3181
                                                                                                                                                                                                                                     3181
                                                                                                                                                                                                                                                         3241
                                                                                                                                                                                                                                                3241
                                                                                                                                                                                                                                                                                                                                                      3541
                                                                                                                                                                                                                                                                                                    3361
                                                                                                                                                                                                                                                                                                             3421
                                                                                                                                                                                                                                                                                                                       3421
                                                                                                                                                                                                                                                                                                                                  3481
                                                                                                                                                                                                                                                                                                                                            3481
                                                                                                                                                                                                                                                                                                                                                                 3541
                                                                                                                                                                                                                                                                                         3361
                                                                                                                                                                                                                                                                                                                                                                           3601
              Pp
    ò
                        ò
                                 g
                                             οy
                                                       g
                                                               ŏ
                                                                           qq
                                                                                      òχ
                                                                                              g
                                                                                                          δý
                                                                                                                    g
                                                                                                                              ò
                                                                                                                                        qq
                                                                                                                                                   δ
                                                                                                                                                             g
                                                                                                                                                                                  d
                                                                                                                                                                      δŽ
                                                                                                                                                                                             οy
                                                                                                                                                                                                    g
                                                                                                                                                                                                                δý
                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                   οy
                                                                                                                                                                                                                                             QΩ
                                                                                                                                                                                                                                                         οy
                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                           δy
                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                      οy
                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                 ò
```

3660 3720 3720 3780 3780 3840 3840	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	4080 4080 4140 4140 4200	4260 4260 4320 4320 4380 4380	4440 4440 4500 4560 4560	4620 4620 4680 4680 4740
TCATGTGGTTTGTTCATATGAATGACGAAAATAGCAATTTTTATATATTTTCCCCTAY toatgttgtgcagaaaatagtaaaaaggcgcatgcatttttcgacattttttacatcgi	ANGIAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG	tttattgataattatagatgttaataagcatatcttgaatgaa	gaggatataattgaatgaaacattgogaaattaaaatgtgogaaacgtcaaaaaagagga 	ctggaccaactcaatacatattccatgaagagatatgaactttgtcgatgcaccaacca	acaaggacaatcttaccaatttgttcagatgcatgggctatacggttatttgcaaggaca
3601 3661 3661 3721 3721 3781 3781	96 96 96	4021 4021 4081 4081 4141	4201 4201 4261 4261 4321	4381 4441 4441 4501	4567 4627 4627 4687 4687
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

4800 4800 4860 4860	4920 4920 4980 4980	a 5040 	t 5160 T 5160	c 5220 5220	g 5280 G 5280	t 5340 5340	a 5400 5400	a 5460 A 5460	t 5520 T 5520	c 5580 1 5580	a 5640 A 5640	g 5700 5700	g 5760 G 5760	c 5820 5820
TTTTC TTTTC TABABA	aatcaatt AATCAATT tggcaaac 	gcaata SCAATA 	tagattt1 TAGATTT	aatatc AATATC	tgcattg GCATTG	tgcacca TGCACCA	gccaaaa GCCAAAA	aaccaaa AACCAAA	ttgttcc TGTTCC	tgccaaa TGCCAAA	gaatgtg GAATGTG	caacgcg CAACGCG	tcgagge TCGAGGC	agaacgt AGAACGT
Sttteg STTCG STTTCG STTTCG ATTTCA	agcacgaa AGCACGAA tgaaaatt 	ccggaaa CCGGAAA 	tttttc 	ttt	ccatt 	aaaat AAAAT	ccgaaaa CGAAAA	tcccaaa cccaaa	teccagee cccAGCC	gagactt GAGACTT	ggagaaga GGAGAAGA	gatettet GATCTTCT	caggettg 	tcattttc CATTTTC
rtacct TTACCT TACCT Ctataa	cttgat crrgar 	aaccact AACCACT tcatccg	tataaca FATAACA	aaaat AAAAT	9969	tttgt rrrgr	tgaaatct TGAAATCT	ttg	att ATT	acaatt ACAATT	atcacacç ATCACACC	yatatat SATATAT	ctttgtg rrrgrg	aaataaat! AAATAAAT!
aaa agt	catacaaaa(otttaa 	aaagtt AAAGTT	Jagaatg 	ccttaaa 	ccgtagt CCGTAGT	ytaaaat STAAAAT	ttttgg 	aacccga 	egetee 	tgattct 	<u>წ</u> —0	gaaaatcgt GAAAATCGT	11-E
cricege cricege cricege trittic	ttttccg TTTCCG aaaatgc	tttaaa TTAAA aaattc	ttta	agaaaa AGAAA	0 - 0	accaggta ACCAGGTA	A — a	tcgattttt 	ფ — ⋖	ccagggaat ccagggaar	は二百	4) — Fi	S = S	aatatë AATAT
ttt rrrr rrrr ctat	CA CA	AT AT	10 - 74	걸드달	tgaaatta rGAAATTA	tgtcgag rgrcgag	cctaat CCTAAT	cgaatt CGAATT	aaaata AAAATA	ttaattt TAATTT	attetge ATTCTGG	atatacc ATATACC	tggcgaa TGGCGAA	taatttt TAATTTT
aacaaaa 	taaatttt 	atg ATG ACG	gaaaaaat GAAAAAA	tttttta TTTTTA	gagagtti GAGAGTT	tttgtc 	검그림	gt -	cctgo CTGO	actgatat: ACTGATAT	acacggag ACACGGAG	agttgatg AGTTGATG	teceegte Teceegre	ttat TTAT
ttgcaaa. TTGCAAA tttttc 	ccgtttg CCGTTTG tctgaat 		aaaattt 	tcaaaatt TCAAAATT	acagette ACAGCTIC	accaaaaat 	tggacaat TGGACAAT	attcaaaa ATTCAAAA	aaatcaat AAATCAAT	aatgtaaa AATGTAAA	acgaatca ACGAATCA	ttattgga TATTGG	caaatgct CAAATGCT	gttegtti GTTCGTT
4741 t. 4741 T. 4801 g 4801 G	4861 ac 4861 Ac 4921 tr 4921 Tr	981 981 041	01	5161 t 5161 T	21	5281 8	5341 t	5401 8	5461 6	21	5581	5641	5701	5761
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	a yo	O O O	op oy	Db	Db Qy	Db	Db Qy	DP QY	Db	Db Qy	Db	Db	Db	Dp Qy

ctgtcgacggagttcctgcatttcttcgtcgtg 5880 [GGGAtataattacgaaatttgtgataaaatgac 6060 	### STATE OF THE PROPERTY OF T		CATTCTGATTCGATACGCAACGACAGCTCAA 636 atcatggttcattcaagccgtctgtgaagtg 642	cgaatat CGAATAT aggacac 	aattttagtttttagctaaaatgattgatttt 6660 	attttactgaaacgaaatttgtagtttttc 6780 	taaaaattaattcaaagttgtccacgagtatt 6900
gtgacaatggattcccagtcti 	attccagaaagtcccgatcgaaaaa 	aattgctgattggtcgc 	99agcgaaagccccgtcctgta 	atttcgtggagaacag atttcgtggagaacag 	togottgtggatttcaga 	tttgcaagcctgccgcgcgtc 	ccagtaaaaatgtttattag 	gcatttaagccaaaattgttaa
5821 5821 5881 5881 5941	6001 6001 6061 6061		6241 6241 6301 6301	0 6 6 4 4	48 48 54 54	6601 6601 6661 6661	6721 6721 6781 6781	6841 6841 6901
9	Oy Oy	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	6 6 6 6 6	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 O O O O O O O O O O O O O O O O O O O	do 0,

```
7140
                                                                                                                                                                                                                                                                                                                                              7200
                                                                                                                                                                                                                                                                                                                                                                                                                                     7260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7260
                                                                                                                                                                                                                                                                                                                                                                                           7200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7380
                                                                                                                                                                                  7380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C.elegans; cell death; gene; ced-3; inhibition; human; parasite; interleukin-lbeta convertase; ICE; pro-interleukin-lbeta; cytokine; inflammatory response; nematode; diagnosis; myocardial infarction; stroke; degenerative disease; traumatic brain injury; hypoxia; pest; pathogenic infection; hair loss; cancer; autoreactive antibody; ss. Caenorhabditis elegans.
                                                               ACACGGTTGGCGCGCGCAAGTTTGCAAAACGACGCTCCGCCTCTTTTTCTGTGCGGCTT
                                                                                                                                                                                                                                                                            gcccagtatatatgtatgtactatgcttctatcaacaaaatagtttcatagatcacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ccgcctgctcaaaaagttctacttttggccggaagcacgaaactctgccgtctaaaattc
                                                                                                                                                                                                                                                  actogigaticatigcccaatigataatigicigiatcticicccccagiticititigc
                                                                                                                                                                                                                                                                                                                                           ccaattagtttaaaaaccatgtgtatattgttatcctatacccatttcactttatcattct
                                                                                                                                                                                                                                                                                                                                                                                                                                   atcatttctcttcccattttcacacatttccatttctctctacgataatctaaaattatgac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gtttgtgtctcgaacgcataataattttaataactcgttttgaatttgattgttgt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ttaacctattttttcgccacaaaaatctaatatttgaattaacgaatagcattcccatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCTCCCGTGCCGGAATGCCTCCCGGCCTTTTAAAGTTCGGAACATTTGGCAATTATGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               aaatttgtaggtccccccatcatttcccgcccatcatctcaaattgcattcttttcg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tctcccgtgccggaatgcctcccggccttttaaagttcggaacatttggcaattatgtat
/rpt_type= INVERTED
/note= "inverted w.r.t. repeat at 1356-1472"
2232..236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag= a //Type= INVERTED //Type= Inverted w.r.t repeat at 1490-1614" //Type= //Type= //Type= //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //Type= b //
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
1356..1472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q54401 standard; DNA; 7653 Q54401; 01-JUL-1994 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ced-3 gene.
                  6901
                                                                                                            6961
                                                                                                                                                                                                                                                7081
                                                                                                                                                                                                                                                                                          7081
                                                                                                                                                                                                                                                                                                                                       7141
                                                                                                                                                                                                                                                                                                                                                                                 7141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7261
                                                                 6961
                                                                                                                                                         7021
                                                                                                                                                                                                   7021
                                                                                                                                                                                                                                                                                                                                                                                                                              7201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                          g
                                                                                                                                                    g
                                                                                                         δy
                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                 QY
                                                                                                                                                                                                                                                                                        οy
                                                                                                                                                                                                                                                                                                                                                                                 δy
                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ΟŸ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

```
misc_feature
                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                 WO9325694-A.
                                                                                                                                                       repeat_unit
                                                                                                                                                                               repeat_unit
                                                                                                                                                                                                                          mutation
     mutation
                                          mutation
                                                           mutation
                                                                              mutation
                                                                                                mutation
                                                                                                                  mutation
                                                                                                                                     intron
                                                                                                                                                                                                        exon
                       exon
                                                                                                                                    /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 3329-3396"
3329..3396
                                                                                                                                                                            /rpt_type= INVERTED
/note= "inverted w.r.t. repeat at 3126-3243"
3487..3759
                                                                                                                                                                                                        /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 3782-4070"
                                                                                                                                                                                                                                rpt_type= INVERTED
/note= "Inverted w.r.t. repeat 3487-3759"
4303..4634
                                                                                                                                                                                                                                                                                                                                                           *tag= t
note= "G>A, from allele n2433"
7761..5814
                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag= w
/note= "C>T, from allele nll65"
                                                                        /*tag= 9
note= "G>A, fromm allele n718"
876..2853
                  *tag= d
note= "C>T, from allele n1040"
367..2429
                                                                                                                                                                                                                                                                               4688.4719
/*tag= q
/rpb_type= INVERTED
/note= "Repeat 3"
5221..5330
                                                                                                                                                                                                                                                                                                                     /rpt_type= INVERTED
/note= "Repeat 3"
5547..5760
                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= x
/number= Intron_6
6062..6138
/*tag= y
                                                                                             /number='Intron_2
2854..3107
/*tag= i
                                 /*tag= e /number= Intron_1 2430..2575
                                                                                                                                '*tag= j
'number= Intron_3
                                                                                                                                                                                                                                                                                                                                                                                    'number= Intron_5
                                                                                                                                                                                                                                                                            Intron_4
                                                                                                                                                                                                                                                                                                                                                                                                      'number = Exon_6
                                                                                                                                                                                                                                                         /number= Exon_4
1635..5546
                                                                                                                                                                                                                                                                                                                                              'number= Exon_5
                                                                                                              *tag= i
number= Exon_3
/*tag= c
/number= Exon_1
                                                            /number= Exon_2
2487
                                                                                                                    5815..5942
/*tag= v
                                                                                                                                           3126..3243
/*tag= k
                                                                                                                                                                                                                                                                                                                                                                                                                              5943..6297
                                                                                                                                                                                                                    3782..4070
                                                                                                                                                                                                                                                                      /*tag= p
/number= I
                                                                                                                                                                                                                                                                                                                                                                              *tag= u
                                                                                                                                                                                                   /*tag= m
                                                                                                                                                                                                                           /*tag= n
                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                 '*tag= r
                                                                                                                                                                                                                                                                                                                                         *tag=
                                                                                           *tag=
                                                                                                                                                                           *tag=
                                                       *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                          repeat_unit
                                                                                                                                                                                                                     repeat_unit
                                                                                                                                                                                                                                                                                   repeat_unit
                                                                                                                                           repeat_unit
                                                                                                                                                                    repeat_unit
                                                                                                                                                                                             repeat_unit
                                                                                                                                                                                                                                                                                                                                                      mutation
                                                                                                                                                                                                                                                                                                                                                                                                            nutation
            mutation
                                                                  nutation
                                                                                                                                                                                                                                                                                                                                                                       intron
                                                                                                                                                                                                                                                                                                                                                                                                                               intron
                                                                                                                                                                                                                                                                intron
                                                                                                                          intron
                              intron
                                                                                     intron
                                                                                                                                                                                                                                              exon
                                                                                                                                                                                                                                                                                                                                   exon
                                                                                                                                                                                                                                                                                                                                                                                          exon
                                                 exon
                                                                                                        exon
```

```
AMASSACHUSETTS INST TECHNOLOGY.

AMASIA MASSACHUSETTS INST TECHNOLOGY.

B Horvitz HR, Shaham S, Yuan J;

B P-PSDB; R45262.

B P-PSDB; R45262.

Agents which affect activity of cell death genes - used to develop drugs for treating conditions characterised by cell death profused by cell death corporation terminal of the profusin encoded by this sequence act as inhibitors of ced-3. This gene has considerable similarity to human contention terminal of the profusin encoded by this sequence act as inhibitors of ced-3. This gene has considerable similarity to human content to the active cytokine and is involved in inflammatory response in humans. The similarity between the two sequences suggests that inhibitors of ced-3 proteins have an overall amino acid similarity of 28%. The ced-3 inhibitors may be used for identifying agents which affect the activity of a gene belonging to the to the ced-3/ICE family of genes and for diagnosis of diseases characterised by cell deaths. They can also be used to develop drugs for treating conditions characterised by cell deaths such as myocardial infarction, stroke, degenerative disease, traumatic brain injury, hypoxia, pathogenic infection, or hair loss, or drugs for reducing the proliferative capacity or size
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rpt_type= INVERTED
note= "Inverted w.r.t. repeat at 6905-6965"
                                                                                                                                                                                                                                                                                                                                                                     /*tag= ad
/note= "C>T, fromm alleles n1129 and n1164"
6485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rpt_type= INVERTED
/note= "Inverted w.r.t. repeat 6567-6625"
/013..7075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag= al
/note= "Claim 2, inhibitor fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag= am
/note= "Claim 2, inhibiotr fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag= ak
/note= "C>T, from allele n1163"
                                                                        /*tag= z
/note= "G>A, fromm allele n717"
6298..6537
                                                                                                                                                                                                              /*tag= ab
/note= "C>T, from allele n1949"
6372
                                                                                                                                                                                                                                                                                                                                                                                                                                                        /*tag= ae
/note= "C>T, from allele n2430"
6535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag= af
/note= "G>A, from allele n2426"
(5538..7012
                                                                                                                                                                                                                                                                                                                /*tag= ac
/note= "G>A, from allele n1286"
6434
/rpt_type= INVERTED
5297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'number= Intron_7
5567..6625
                                                                                                                                                                          /number= Exon_7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /number= Exon_8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ah
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ..6965
                                                                                                                                                            aa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *tag= ag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag= aj
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.3020
/*tag= 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ..5850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-DEC-1993.
14-JUN-1993; U05705.
12-JUN-1992; US-897788.
20-NOV-1992; US-984182.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *tag=
                                                                                                                                                            /*tag=
```

ö of a population of cells such as cancerous cells, cells which produce autoreactive antibodies, infected cells, hair follicle cells or cells which are critical to the life of a parasite, pest or recombinant organism. They may also be used in the diagnosis of inflammatory 180 240 240 420 420 480 360 TITICITIGITCITITIGITGAACGIGITGCIAAGCAATTATTACATCAATTGAAGAAAA 360 540 900 999 780 840 780 900 096 agatctgaaataaggtgataaattaataaattaagtgtatttctgaggaaatttgactgt 60 9 Gaps 181 AAAGAATTGTGAGAGCAAACGCGCTCCCATTGACCTCCACACTCAGCCGCCGAAAAAAA AGATCTGAAATAAGGTGATAAATTAAATTAAGTGTATTTCTGAGGAAATTTGACTGT ttgtcgaattaatatccctattatcactttttcatgctcatcctcgagcggcacgtcctc ggctcgccgatttattgttgccagaaagattctgagattctcgaagtggattttataata tttaaccttggtttttgcattgtttcgtttaaaaaaaccactgtttatgtgaaaacgat caaaaacaatcctaagatttccacatgtttgacctctccggcaccttcttccttagcccc ctcatttggtatgctcttttcgattttatagctctttgtcgcaatttcaatgctttaaac tagittactaataaaactactittaaacctitaccittaccicaccgciccgigitcatg gotcatagattttcgatactcaaatccaaaataaatttacgagggcaattaatgtgaaa CAAAAACAATCCTAAGATTTCCACATGTTTGACCTCTCCGGCACCTTCTTCCTTAGCCCC aatccaaatcgcattatatttgtgcatggaggcaaatgacggggttggaatcttagatga gatcaggagettteagggtaaacgeeeggtteattttgtaeeaaatteatettteet ; 0 Score 7405; DB 9; Length 7653; Pred. No. 0.00e+00; 0; Mismatches 8; Indels 0 ; છ 1272 1452 C; À; 2429 96.88; 99.98; Best Local Similarity 99.9%; Matches 7645; Conservative 7653 BP: Sequence Query Match disease. 61 61 121 181 241 301 481 481 541 301 361 361 421 421 541 601 661 601 661 721 721 781 781 841 841 901 8888888 g ò 원 à 셤 g g g g ö ò ò ò ò 엄 qq ò ò g ò g à g õ g ò q οy g ò g

tccgtaataatttcacaagattttggcattccactttaaaggcgcacaggatttattcca 1680 1621 TCCGTAATAATTTCACAAGATTTTGCCATTCCACTTTAAAGGCGCACAGGATTTATTCA 1680 atgggtctcggcacgcaaaaagtttgatagacttttaaattctccttgcatttttaattc 1740 1801 TICCAGGCIGACAAACAAAAAAAAAAAAAAAAAAAAATITIAAAAAICAGIIITICAAAI 1860 GATTCAAAACAATTTTAACAAAAAAAAACCCCAAAATTCGCCAGAAATCAAGATAAAAA 1980 Cacctgtctccgtctcaattatcgtttagaaatgtgaactgtccagatgggtgactcata ttgctgctgctacaatccactttcttttctcatcggcagtcttacgagcccatcataaac GTCGTCCTTGGTATCCTCAACTTGTCCCGGTTTTTGTTTTCGGTACACTCTTCCGTGATGC 1021 TTGCTGCTGCTACAATCCACTTTCTTTTCTCATCGGCAGTCTTACGAGCCCATCATAAAC tatatacaatccataagaatatcttctcaatgtttatgatttcttcgcagcactttctct tcgtgtgctaacatcttattttataatatttccgctaaaattccgatttttgagtatta TCGTGTGCTAACATCTTATTTTTATAATATTTCCGCTAAAATTCCGATTTTTGAGTATTA atttatcgtaaaattatcataatagcaccgaaaactactaaaaatggtaaaagctccttt taaatcggctcgacattatcgtattaaggaatcacaaaattctgagaatgcgtactgcgc aacatatttgacgtcaaaatatctcgtagggaaaactacagtaattctttaaatgactac gctacgagatattttgcgcgccaaatatgactgtaatacgcattctctgaattttgtgtt tgataacccgtaaatcgtcacaacgctacagtagtcatttaaaggattactgtagttcta ttccaggctgacaaacagaaacaaaaacacaacaaaaacattttaaaaaatcagttttcaaat gattcaaaacaattttaacaaaaaaaaccccaaaattcgccagaaatcaagataaaaa 1081 1141 1201 1261 1381 901 961 1021 1081 1141 961 1261 1321 1621 1201 1381 1501 1681 1681 1801 1921 1981 1561 1861 1861 1921 g ò 원 Ω qq ά QΥ δ 원 οy qq g δλ g g οy οy ŏ g δ 셤 ò g δ g òγ Dp Qγ g g g ò ŏ a ò

2040

1981

δŏ

				00000	0 0 0 0 0
2100 2100 2160 2160 2220 2220 2280	2280 2340 2340 2400 2400	2460 2460 2520 2520 2580 2580	264C 254C 270C 270C 276C 276C	282 282 288 288 294 294	a 300' h 300' g 306' G 306 G 312
agttgttggagtttttgacgaaactaggaaaaatcgataaaaattactcaaatcg 	ATCAGCCGAAGATGATGCTCAAGATAGAAGGAGCTTGCTAGAGGAACATTATGATGT	aattgataatataaagaatattttgcagtcatgtggaacggttcgcgagaagagacggg	1 ttttaaagtteggegaaaageaaggteteaeggaaaaa ITTTTAAAGTTEGEGEAAAGEAAGGGTETEAEGGAAAAAA 1 TTTTAAAGTTEGEGEAAAGEAAGGGTETEAEGGAAAAAA 1 geaacccaccggcacggtttttectccgaaatcggaaatt 	attttcgtggcgca 	41 ttcaccgacccgagttcaccgtgacagcgtctcttcagtgtcatcattcacttcttatcc
2041 2041 2101 2101 2161 2161 222	22 28 28 34 48	240. 246. 246. 246. 252.	7 7 6 6 2 2	7 7 8 8 8 8	297 300 30 30 30
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	oy oy		g do do do do do do do do do do do do do	d by da by	00 00 00 00 00 00 00 00 00 00 00 00 00

			cagttcaagtcgtaatcgctattcagcaaagctt 4380 	catgaagagatatgaactttgtcgatgcaccaacca 4440 	atgtacagaaacttctcgagtcctcgtggaatgt 450 	Gagcagatgccaacacggaatggtaccaaggccg 456	gatgcatgggctatacggttatttgcaaggaca 462	NGATGCATGGGCTATATTTGCAAGGA atattacccaaacgcgaaatttgccatttt	ATATTACCCAAACGCGAAATTTGCCATTTTGC	acgacaatttgtgttaaatgcaaaatgtataat 4740 	cgcgaaatgatttacctagttcgaaatttc 480	ttcttagtttttctataatatttgatgtaaaaa 486	TTTCTTAGTTTTTCTATAATATTTGATGTAAAAA 486	TUTS GARGAGA TO THE STATE OF TH	racaatttaaaatttgtgaaaattggcaaac 498 	aactttaaaaaccactcogaaaagcaataa 504 	caaaagttattcatccgatttgtttatttttg 510	.caaaagttttataacattttttctagattt		aaaaagagaatgaaaatcgattttaaaaatatcc 5220 	actcttaaagggacaccccatttgcattgg 528	gtaccgtagtttttgtcgcaaaattgcaccat 534
	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		1 tcaccggatgctcttctctcgge 	<pre>1 ctggaccaactcaatacatattc </pre>	1 taagccgtgtttcgacgagaaaacc 	gcctcatcataaataatgaacacttt 	1 acaaggacaatcttaccaatttgttc 	1 ACAAGGACAATCTTACCAATTIGITC 1 atctgacgggaagggtacggcgaaat	1 ATCTGACGGGAAGGGTACGGCGAAAT	1 ccgaaaatgtggcgcccggtctc 	ttgcaaaaacaaatttgaactt 	gtttttccggctacattatgtgttt 	GTTTTTTCCGGCTACATTATGTGTTT accqtttqtaaattttcagacaatt	ACCGTTTGTAAATTTTCAGACAATTT	ttctgaattttcaaaattat 	ggtgtttcaatatgaaatgtatttt6 	aaatcaaaacaacgtcacaattcaaat 	caaaatttgaaaaatcatgaaggatt	CAAAATTTGAAAAAATCATGAAGGATT	tcaaaatttttttaacaaatcgag 	acagcttcgagagtttgaaattacagt 	accaaaaattgtcgtgtcgagaccag

```
atcatttctcttcccattttcacacatttccatttctctacgataatctaaaattatgac 7260
                                                                                                                                                                        gaaaacaagggatcggtttagatttttccccaaaatttaaatttcagatgacatc 7020
                                                                                                                                                                                                    6840
                                                                                                                                                   aacgaaatttatcgatttttaaatgtaaaaaaaaatagcgaaaattacatcaaccatcaa 6840
                         İIIİIII Iİ HIHLIİİHIHLI İİİTIH İİİİH İİH İHH İİH İH İH İH İİH İİHİH İİİİ İ İ B 6540 6481 GICGUTGIĞGATITCAGACAICAGGGALCGAATATITIGAAACAGAIGCCAGAĞIA 6540
                                                   6541 CITGAAACAAAGAATGCATGTCTAACTITTAAGGACACAGAAAAATAGGCAGAGGCTCCT 6600
        cttgaaacaaacaatgcatgtctaacttttaaggacacagaaaaataggcagaggctcct
                    6481 gtcgcttctgcatttcagacatcacagggatcgaatattttgaaacagatgccagaggta
                                                                                                                                                                                                                                                      7081
                                                                                                                                                                                                                                           7081
                                                                                                                                                                                                                                                                                      7201
                                                                                                                                                                                                 6961
                                                                                                                                                                                                                     7021
                                                                                                                                                                                                                                7021
                                                                                                6661
                                                                                                                                           6781
                                           6541
                                                                                      6661
                                                                                                           6721
                                                                                                                      6721
                                                                                                                                 6781
                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                               Ω
                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                    g
                                                                                                                                                                ŏ
                                                                                                                                                                          QQ
                                                                                                                                                                                    ٥y
                                                                                                                                                                                               g
                                                                                                                                                                                                           ò
                                                                                                                                                                                                                   Dp
                                                                                                                                                                                                                               Οý
                                                                                                                                                                                                                                                     δ
                                                                                                          ä
                                                                                                                     ò
                                                                                                                                a
                                                                                                                                           á
                                                                a
                                                                                    q
                                                                                                ò
           ò
                      셤
                                 ò
                                         qq
                                                     ò
                                                                          ŭ
```

```
7501 TCTCCCGTGCCGGAATGCCTCCCGGCCTTTTAAAGTTCGGAACATTTGGCAATTATGTAT 7550
tctcccgtgccggaatgcctcccggccttttaaagttcggaacatttggcaattatgtat 7560
                                                                                                                                                          ced-3 gene.
C. elegans: ced-4; ced-3; mutant; transcriptional regulation; embryogenesis; cell death; hydrophilic; transmembrane; region; hydrophobic; mutation; amino acid; substitution; RNA splicing; protein synthesis; null phenotype; calcium-binding domain; ss. Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Inverted w.r.t. repeat at 3329-3396"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /rpt_type= INVERTED
/note= "inverted w.r.t. repeat at 3126-3243"
3487..3759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat at 3782-4070"
                                                                                                                                                                                                                                                                              /rpt_type= INVERTED
/note= "inverted w.r.t. repeat at 1356-1472"
                                                                                                                                                                                                                                    /rpt_type= INVERIED
/note= "Inverted w.r.t repeat at 1490-1614"
1490..1614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'note= "Inverted w.r.t. repeat 3487-3759"
                                                                                                                                                                                                                                                                                                                                     d
"C>T, from allele n1040"
                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag= g
/note= "G>A, fromm allele n718"
                                                                        7621 cogtgatatecegattetggteageaagatet 7653
                                                                                   /rpt_type= INVERTED
/note= "Inverted w.r.t.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rpt_type= INVERTED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /rpt_type= INVERTED
                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Intron_3
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Intron_2
                                                                                                                                                                                                                                                                                                                                                                        Intron_1
                                                                                                                                                                                                                                                                                                                                                                                                  'number= Exon_2
                                                                                                                                                                                                                                                                                                                   'number= Exon_1
                                                                                                                                 Q54666 standard; DNA; 7653 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      126..3243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         329..3396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .4070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4303..4634
                                                                                                                                                                                                                                                                                                ..2366
                                                                                                                                                                                                                                                                                                                                                                                                                                      2576..2853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            108..4302
                                                                                                                                                                                                                         1356..1472
/*tag= a
                                                                                                                                                                                                                                                                                                                                                      .2429
                                                                                                                                                                                                                                                                                                                                                                                2430..2575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2854..3107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag= m
                                                                                                                                                                                                                                                                                                                                                                Φ
                                                                                                                                         Q54666;
23-JUN-1994 (first entry)
                                                                                                                                                                                                                                                                      /*tag= b
                                                                                                                                                                                                                                                                                                           U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'number=
                                                                                                                                                                                                                                                                                                                                                                       'number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                          'number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *tad=
                                                                                                                                                                                                                                                                                                                                                                                           *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   note=
                                                                                                                                                                                                                                                                                                                                                                /*tag=
                                                                                                                                                                                                                                                                                                           *tag=
                                                                                                                                                                                                                                                                                                                                      /*tag≈
                                                                                                                                                                                                                                                                                                                                               'note=
                                                                                                                                                                                                                                                                                                                                                                                                             2487
                                                                                                                                                                                                                                                                                                                                                        2367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_unit
                                                                                                                                                                                                                           repeat_unit
                                                                                                                                                                                                                                                               repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                             mutation
                                                                                                                                                                                                                                                                                                                              mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               intron
                                                                                                                                                                                                                                                                                                                                                         intron
                                                                                                                                                                                                                                                                                                                                                                                                                                        intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           exon
                                                                                                                                                                                                                                                                                                                                                                                   exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     exon
    7501
                                                                                                                                                                                                                                                                                                     exon
                                                                                                                                 g
                                                                                               ŏ
                                                           Óλ
```

```
'rpt_type= INVERTED
note= "Inverted w.r.t. repeat at 6905-6965"
                                                                                                                                                                                                                                                                                              ad
"C>T, fromm alleles n1129 and n1164"
                                                                                                                                                                                                                                                                                                                                                                                                        rpt_type= INVERTED
note= "Inverted w.r.t. repeat 6567-6625"
                                                                                                 /*tag= t
/note= "G>A, from allele n2433"
                                                                                                                                                          /*tag- w
/note= "C>T, from allele nl165"
5943..6297
/*tag- x
                                                                                                                                                                                                                   *tag= 2
'note= "G>A, fromm allele n717"
                                                                                                                                                                                                                                                         *tag= ab
note= "C>T, from allele n1949"
                                                                                                                                                                                                                                                                                                                 ae
"C>T, from allele n2430"
                                                                                                                                                                                                                                                                           *tag= ac
'note= "G>A, from allele n1286"
                                                                                                                                                                                                                                                                                                                                  af
"G>A, from allele n2426"
                                     'rpt_type- INVERTED
                                                              'rpt_type= INVERTED
'note= "Repeat 3"
                                                                                                                                                                                                        rpt_type= INVERTED
                                                                                                                                                                                                                                                                                                                                                5538...
/*tag= ag
/*tag= Intron_7
           /*tag= p
/number= Intron_4
                                                                                                                             'number= Intron_5
                                            "Repeat 3"
                                                                                                                                                                                     number= Intron_6
                                                                                       'number= Exon_5
Exon_4
                                                                                                                                               number Exon_6
                                                                                                                                                                                                                                      *tag= aa
'number= Exon_7
                                                                                                                                                                                                                                                                                                                                                                                                                                'number= Exon_8
                                                                                                                                                                                      fi.
.4..6138
/*tag= ..
rr*
                                           /note= "Rep
5221..5330
      1635..5546
                        688..4719
                                                                          ..5760
                                                                                                                                                                                                                                                                                                                                                                                                        ..6537
                                                                                                                        *tag= u
                                                                                                                                                                                                                                                                                                                                                5538..7012
                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                              å
'number=
                                                                                                                                                                                                                                                                                                                                                                                            .6965
                               *tag=
                                                        *tag=
                                                                                                                                          *tag=
                                                                                 *tag=
                                                                                                                                                                                                                                                                                                                                    *tag=
                                                                                                                                                                                                                                                                                                                 *tag=
                                                                                                                                                                                                                                                                                                    'note=
                                                                                                                                                                                                                                                                                                                                                                                                                                       7020
/*tag=
/note=
                                                                                                                                                                                                                                                                                              *tag=
                                                                                                                                                                                                                                                                                                                       'note=
                                                                                                                                                                                                                                                                                                                                                                          *tag=
                                                                                                                                                                                                                                                                                                                                                                                                   /*tag=
                                                                                                                                                                                                                                                                                                           5485
                                                                                                                                                                                          repeat_region
                        repeat_unit
                                                 repeat_unit
                                                                                                                                                                                                                                                                                                                                                                   repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                           repeat_unit
                                                                                             mutation
                                                                                                                                                     mutation
                                                                                                                                                                                                            mutation
                                                                                                                                                                                                                                                 nutation
                                                                                                                                                                                                                                                                    mutation
                                                                                                                                                                                                                                                                                      mutation
                                                                                                                                                                                                                                                                                                         nutation
                                                                                                                                                                                                                                                                                                                            mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                       mutation
      intron
                                                                                                                intron
                                                                                                                                                                        intron
                                                                                                                                                                                                                                                                                                                                                intron
                                                                          exon
                                                                                                                                   exon
                                                                                                                                                                                                                                exon
```

"C>T, from allele n1163"

W09325685-A.

```
This sequence represents the C. elegans ced-3 gene. A 2.8 kb mRNA was identified as the ced-3 transcript and was most abundant in embryos, but was also detected in larvae and young adults, suggesting that ced-3 is expressed not only in cells undergoing cell death. The Cour largest introns as well as sequences 5' of the start codon contain repetitive elements, some of which have been characterised in non-coding regions of other C. elegans genes, such as fem-1, lin-12 and myvol. The Ced-3 protein is 503 amino acids in length. Ced-3 is highly hydrophilic with no significant hydrophobic region that might be transmembrane region. One region of Ced-3 is very rich in serine. It is thought that this region is involved in protein-protein interactions, similar to acid blobs in transcription factors. Of the mutations which occur within the ced-3 gene, eight of the mutations can missense mutations in volved in protein-protein interactions which occur within the ced-3 gene, eight of the mutations special for viability. The ced-3 inke ced-4, confirming that ced-3, like ced-4, conducts may be used to develop agents for treating conditions characterised by cell deaths, such as myocardial infarction, stroke, degenerative diseases, tranmatic brain injury, hypoxia, pathogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 ttgtcgaattaatatccctattatcactttttcatgctcatcctcgagcggcacgtcctc 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241 gitcgaacattcgiggtgtgtgtccttttccgttatcttgcagtcatcttttgtcgttt 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241 GITCGAACATTCGTGTGTGTGCTCCTTTTCCGTTATCTTGCAGTCATCTTTTGTCGTTT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421 tttaaccttggtttttgcattgtttcgtttaaaaaaccactgtttatgtgaaaaacgat 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tagittactaataaaactactittaaacctitacctitacctcaccgctccgtgttcatg 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 agatotgaaataaggtgataaattaataaattaagtgtatttotgaggaaatttgactgt 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2499 T;
                                                                                                                                                                                                                                                        Isolated C elegans cell death genes ced-3 and ced-4 - used to develop agents to increase or prevent cell death in organisms
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 7219; DB 9; Length 7653;
Pred. No. 0.00e+00;
0; Mismatches 14; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1272 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1453 C;
                                                                                                                               (MASI ) MASSACHUSETTS INST TECHNOLOGY. HOVTIZE HK, Shaham S, Yuan J; WPI; 94-007542/01.
P-PSDB; R47466.
                                                                                                                                                                                                                                                                                          develop agents to increase or pr
Claim 2; Fig 4; 127pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2429 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        infection, aging or hair loss.
Sequence 7653 BP; 2429 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match 94.3%;
Local Similarity 99.8%;
es 7639; Conservative
                                 14-JUN-1993; U05701.
12-JUN-1992; US-897788.
20-NOV-1992; US-979638.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAPPEN PPARAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
```

				0 0 0 0 0 0
600 660 660 660 720 720	780 840 900 900 960	02 08 08 14	1200 1200 1260 1260 1320 1320 1380	1444 1444 150 150 156 162
tcatagattttcgatactcaaatccaaataaatttacgaggcaattaatgt CTCATAGATTTTCGATACTCAAAATAAATTACGAGGCAATTAATGT CTCATAGATTTTTCGATACTCAAAATCAAAATAAATTACGAGGCAATTAATGT CTCATAGATTTTCGATACTCCAAAATCATTACGAGGCAATTAATGT AAAAACAATCCTAAGATTTCCACATGTTTGACCTCTCCGGCACCTTCTTCCTTAG CCACtcCatCaCcttttggcggtgtcttctcgaaacccacttaggaaagcagtgt [cacctgtctccgtctcaattatcgtttagaaatgtgaactgtccagatgggtgactcata [tatatacaatccataagaatatcttctcaatgtttatgatttcttcgcagcactttctct [1] [1] [1] [1] [1] [1] [1] [1] [1] [1]	aacatatttgacggcaaaatatctcgtagcgaaaactacagtaattctttaaatgactacaatatttgacggcaaaatatctcgtagcgaaaactacagtaattctttaaatgactacafiliiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
541 9 541 9 601 9 601 9 661 9		961 961 1021 1021 1081	1141 1141 1201 1201 1261 1261 1321	1381 1381 1441 1501 1501 1561
9 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		0y 0y 0y	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	60 40 40 40 40 40 40 40 40 40 40 40 40 40

g &	1621	actridadyycycacayyartratroca 100
qq	9	tgggtctgggcacggaaaaqtttgatagacttttaaattctccttgcatt
οy	9	
qo .	74	aattactaaaattttcgtgaatttttctgttaaaatttttaaaatcagttttctaatatt 1800
QY	1741	TACTAAAATTTTCGTGAATTTTTCTGTTAAAATTTTTAAAATTTTTTTT
QC	80	aaaacacaacaaacattttaaaaatcagttttcaaat 186
QY	1801	TCCAGGCTGACAAACAAAAAAAAAAAAAAAAAAAAAAAA
qq	1861	aaaaataacgattteteattgaaaattgtgttttatgtttgecaaaataaaagagaaet 192
ΟŽ	1861	AAAAATAACGATTICICATIGAAAATIGIGITITAIGITTGCGAAAATAAAAGAGAAACT 192
QQ	1921	aacaattttaacaaaaaaaaccccaaaattcgccagaaatcaagataaaaa 198
QΥ		aticaaaacaatititaacaaaaaaaaccccaaaatrccccagaaatcaagataaaaa 198
Dp	1981	tcaagagggtcaaaatttccgattttactgactttcacctttttttt
Qy	1981	CAAGAGGGICAAAATTTICCGATTTTACTGACTTTCACCTTTTTTTTCGTAGTTCAGT 204
QQ	2041	cagttgttggagtttttgacgaaaactaggaaaaatcgataaaaattactcaaatcg 210
δy	2041	CAGITGITGIGITTITGACGAAAACTAGGAAAAAATCGATAAAATTACTCAAATC
qq	2101	tgaattttgaggacaatgtttaaaaaaaaacactattttccaat
δy	2101	
Db	2161	agactaaatcgaaaatcaaatcgtactctgactacggctcagtagagaggtcaacc 222
ΟŊ	2161	ICAGACTAAATCGAAAATCAAATCGTACTCTGACTACGGGTCAGTAGAGAGGTCAACC 222
Dp	2221	cagccgaagatgatgcgtcaagatagaaggagcttgctagagaggaacattatgatgt 228
ΟŻ	2221	
Dp	2281	totagicatciaaaagtegaigaaattetegaagtieteategeaaaaaaagtgitga 2:
δy	2281	TAGTCATCTAAAAGTCGATGAAATTCTCGAAGTTCTCATCGCAAAACAAGTGTTG
QQ	2341	1401 - III III
QY	2341	STGATAATGGAGATATGATTAATGTGAGTTTTTAATCGAATAATAATTTTAAAAAA 240
qq	2401	gataatataaagaatatttttgcagtcatgtggaacggttcgcgagaagagacggg 246
QY	2401	ITGATAATATAAAGAATATTTTTGCAGTCATGTGGAACGGTTCGCGAGAAGAGAGGG 24
QQ	2461	ogtgaaagcagtgcaacgacggggagatgtggcgttcgacgcgttttatgatgctc 252)
ΟŊ	2461	GATCGTGAAAGCAGTGCAACGACGGGGAGATGTGGCGTTCGACGCGTTTTATGATGCTC 252
qq	2521	getetacgggacacgaaggacttgctgaagttettgaacetetegecagategtagg 258
Qγ	2521	ICGCICTACGGGACACGAAGGACIIGCIGAAGIICIIGAACCICICGCCAGAICGIAG
qq	2581	tttttaaagttoggcgcaaaagcaagggtctcacggaaaaagaggccgatcgtaatttt 264
QY	2581	TITITAAAGTICGGCGCAAAAGCAAGGGTCTCACGGAAAAAAGGGCGGATCGTAAITIT 264
qq	64	gcaacccaccggcacggtttttcctccgaaaatcggaaattatgcactttcccaaata 270
δy	2641	GCAACCCACCGGCACGGTTTTTCCTCCGAAAATCGGAAATTATGCACTTTCCCAAATAY 2/0
Ob	2701	. ttgaagtgaaatatattttatttactgaaagctcgagtgattatttat

	regeaaaggccatttgtagatttgccgaaaatacttgtcacacaca	.ccttcaaatatcccttttccagtgttgactcgaatgctgtcgaattcga 2880 	tcaccggcaagccatcgtcggagccgcgcattgagccccgccggctacac 294	ogagticacogigacagogicicitcagigicatoaticacitcitatca 300 	tcaagagcaagatctcgttctcgatcgcgtgcacttcattca	toatctcctccagtcaacgcattcccagccaacttgtatgttgatgcg 312 	totgagaatgogoattactoaacatatttgaogogoaaatatotogtago 3180 	gtaaccctttaaatgactattgtagtgtcgatttacgggctcgattttcg 3240 	atgctcgaattgtgacaacgaattttaatttgtcatttttgtgttttctt 3300 	11	jttacagtagttitcgcttcaagatattttgaaaagaattttaaacattt 3420 	catctaacatgtgccaaaacgctttttcaagtttcgcagattttttga 3480 	caagatatgcttattaacacatataattatcattaatgtgaatttcttg 35 	Iggettitegtietagtatgetetaettitgaaatigeteaacgaaaaa 3600 	gttcatatgaatgaccaaaatagcaatttttatatattttcccctat 3660 	agaaaaatagtaaaaaagcgcatgcattttcgacatttttacatcga 3720 	cttcacatgotgaagacgagagacgcggagaataccacacatcttct 3780 	cttcagcatgtgaaatgggatctcggtcgatgtaaaaaaatgtcgaata 384
TATATT	gcaaaag GCAAAAG	cttcaaa CTTCAAA	caccggc 	gagttca GAGTTCA	caagagc 	catctcct 	tgagaat GAGAAT	aaccctt 	gctcgaa 	tcaatt CAATT	tacagta ACAGTA	atctaac ATCTAAC	aagatat AAGATAT	gettte GCTTTTC	ttcatat TCATAT	gaaaat GAAAAT	ttcacat TTCACAT	ttcagca
27 27 01	DD 2761 OY 2761	Db 2821 Qy 2821	Db 2881 Qy 2881	Db 2941 2y 2941	Db 3001 Qy 3001	Db 3061 Qy 3061	ob 3121 Qy 3121	Db 3181 Oy 3181	ob 3241 2y 3241	Db 3301 Qy 3301	Db 3361 Qy 3361	b 3421 y 3421	Db 3481 Dy 3481	Db 3541 Oy 3541	3601	b 3661 y 3661	b 3721 a y 3721 i	3781
	_					0	- 0		0 0	i O	n o	0	0 0	D O	g S		□ δ	д •

```
3781 GCGTCTCTCGTCTTCAGCATGTGAAATGGGATCTCGGTCGATGTAAAAAATGTCGAATA 3840
                                            3960
                                                           3961 GAGCAACTTAAAAAGTAGAGAATATTAGAGCGAAAACCAAAATTTCTTCAAGATATTACC 4020
                                                                             4080
                                                                                       4080
                                                                                                  4140
                                                                                                                    4320
                                                                                                                                                                                       4380
                                                                                                                                                                      4440
                                                                                                                                                                                                                                  4500
                                                                                                                                                                                                                                                       4560
                                                                                                                                                                                                                                                                 4560
                                                                                                                                                                                                                                                                            4620
                                                                                                                                                                                                  4380
                                                                                                                                                                                                            4440
                                                                                                                                                                                                                                                                                      4620
                                                                                                                                                                                                                                                                                                 4680
                                                                                                                                                                                                                                                                                                                    atgtaaaaaatgcatgcgtttttttacacttttctgcacaaatgaataggggaaaatgt
                attaaaatacattttttgtatttttcaacatcacatgattaaccccattatttttcgtt
                                                      gagcaacttaaaaagtagagaatattagagcgaaaaccaaaatttcttcaagatattacc
                                                                                                                                                                                     aatttgggtatcaaaatcgatcctaaaaccaacactttcagcatccgccaactcttcat
                                                                                                                                                                                                                                                     gcctcatcataaataatgaacactttgagcagatgccaacacggaatggtaccaaggccg
                                                                                                                                                                                                                                                           4561 acaaggacaatcttaccaatttgttcagatgcatgggctatacggttatttgcaaggaca
                                                                                                                                                                                                                                                                                                                                                               accgtttgtaaattttcagacaattttccgcatacaaaacttgatagcacgaaatcaatt
          3841
                     3841
                                          3901
                                3901
                                                      3961
                                                                                                4081
                                                                                                          4081
                                                                                                                                          4201
                                                                                                                                                    4201
                                                                                                                                                               4261
                                                                                                                                                                          4261
                                                                                                                                                                                                4321
                                                                                                                                                                                                          4381
                                                                                                                                                                                                                    4381
                                                                                                                                                                                     4321
                                                                                                                                                                                                                                                     4501
                                                                                                                                                                                                                                                                                                                     4681
                                                                                                                                                                                                                                                                                                                               4681
                                                                                                                                                                                                                                                                                                                                                               4801
                                                                                                                                                                                                                                                                                                                                                                         4801
                                                                                                                                                                                                                                                                                                                                                                                    4861
         g
                             임
                    Qγ
                                          Ω
                                                    g
                                                              δy
                                                                         g
                                                                                    δ
                                                                                             g
                                                                                                        δ
                                                                                                                    g
                                                                                                                                        qq
                                                                                                                                                               g
                                                                                                                               QΛ
                                                                                                                                                    οy
                                                                                                                                                                                   Dp
                                                                                                                                                                         οy
                                                                                                                                                                                               δy
                                                                                                                                                                                                        g
                                                                                                                                                                                                                  οy
                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                         οy
                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                              δy
                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                             Ω
                                                                                                                                                                                                                                                                                  οy
                                                                                                                                                                                                                                                                                                         οy
                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                               Óγ
                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                             Ωp
                                                                                                                                                                                                                                                                                                                                                     ŏ
                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                         Qγ
```

4980 4980 5040 5100 5160	22 22 22 28 28 34 34 34 34 34 34 34 34 34 34 34 34 34	5400 5400 5460 5460 5520	5580 5580 5640 5640 5700 5700	5760 5820 5820 5880 5940 5940 6000
ttctgaattttcaaaattatccaaaaatgcacaatttaaaaatttgtgaaaattggcaaac IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	AATTIGAAAAAAICAIGAAGGATTIAGGAAAAGTTITIGTAACATTITICIAGGATTI aaattttttttaacaaatcgagaaaaagagaatgaaaatcgattttaaaaatatc IIIIIIIIIIIIIIIIIIIIIIIII	tggacaataaaccttcctaatcaccaaaagtaaaattgaaatcttcgaaaagccaaaaa 	atgtaaactgatatttaatttccagggaatgctcctgacaattcgagactttgccaaa. IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	CAAATGCTCCCGTCTGTGTTTTTTTTTTTTTTTTTTTTT
4921 4921 4981 4981 5041 5101	8 8 17 17 Q Q C	5341 5341 5401 5401 5461	5521 5581 5581 5581 5641 5641	5701 5761 5821 5821 5881 5881 5941
	6 6 6 6 6 6	93 G G G G G G G G G G G G G G G G G G G	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

aaatttgtgataaaatgac 6060 	-ggtttgaaagtgggcgga 6120 	aaa 	cattttat FATTTTAT	taataaattttgcagcaa 6300 	gcaa 		gaag GAAG	0-0	aggcagaggctcct 6	ttttagctaaaatgattgattt 6660 	agtcactatttatcgggttt 6720 	gaaaatttgtagtttt 	aaattacatc AAATTACATC	aaagtt AAAGTT	cttttc 	aaattto FAAATTTO	tetge 	tececcag
aagtcccgatcgaaaaattgcgatataa 	atctccgcccactcat 	gctgattgg GCTGATTGG	aaattgatttttcaatttttcgaaaa 	aagcccgtcctgtaaacatttttaaatg 	aagaagccgagccaagctgacattctg 	tgctcgtggatcatggt 	acgcaaaggatatggatgttgttgagc 	ttcagacatcace 	caaacaatgcatgtctaacttttaaggacs 	cgcgcgtcaacctagaattttagt 	atgctaattttttgcgttaaattttge 	aaaatctttattagccattggattttactgaaa 	tttttaaatgtaaaaaaaatagcg 	caaaattgttaactcatttaaaaattaattc 	ogogoggcaagtttgcaaaacgacgctccgc 	agggatcggtttagatttttccccaa 	gctcaaaaagttctacttttggccggaagcac 	gattcattgcccaattgataattgtctgtatc
atteca ATTCCA	8-8	gtgaat GTGAAT	att 	8-6	gtgtgg GTGTGG	tgt - GT	ttctcg TTCTCG	gtcgct 	tga - IGA	tgc	gaatat GAATAT		aacgaa AACGAA	gcattt GCATT7	acacgo ACACGO	gaaaac GAAAAC	cegeet CGGCCI	ctcg
6001	6061	6121	6181	6241		6361	6421	6481	6541		6661	6721 6721	6781 6781	6841 6841	6901	6961	7021	
oy oy	do Vy	Oy Oy	DP QY	DP QY	Db Qy	Dp Qy	Db Qy	DP Qy	Db Qy	Db Qy	Dp Qy	Db Oy	oy Oy	Db	oy Oy	Oy Oy	Db	' සි

```
exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           exon
      7201 atcatttctcttcccattttcacacatttccatttctctacgataatctaaaattatgac 7260
                                                                                                                                                                          7440
                                                                                                                                                                                                                                                                                                                                                                      7500
                                                                                                                                                                                                                                                                                                                                                                                                                                 7201 ATCATTICTCTTCCCATTITCACACATTICCATTICTCTACGATAATCTAAAATTATGAC 7260
                                                                                                                                                                                                                                                        7441 ttaacctatttttcgccacaaaaatctaatatttgaattaacgaatagcattcccatc
                                                                                                                                                                                                                                         gcccagtatatatgtatgtactatgcttctatcaacaaaatagtttcatagatcatcacc
                                                                                                                                                                                                                                                                                                       ccaagcccaacctaccgtaccatattcatttttgcggggaatcaatttcgattaatt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ced-3 (G6372A) gene.
C.elegans: ced-4: ced-3: mutant; transcriptional regulation; embryogenesis; cell death; hydrophilic; transmembrane; region; hydrophobic; mutation; amino acid; substitution; RNA splicing; protein synthesis; null phenotype; calcium-binding domain; ss. Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_type= INVERTED
/note= "inverted w.r.t. repeat at 1356-1472"
2232..236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag=_a
/rpt_type= INVERTED
/note= "Inverted w.r.t repeat at 1490-1614"
1490..1614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /number= Intron_2
2854..3107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Intron_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /number= Exon_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Exon_2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JT 4
Q64741 standard; DNA; 7653 BP.
Q64741;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /number= In
2450..2575
/*tag= e
/number= Ex
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-JUN-1994 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1356..1472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . . 2429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2576..2853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      intron
                                                                                                                                                                          7261
                                                                                                                                                                                                                                       7321
                                                                                                                                                                                                                                                                                                     7381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Key
                                                                                                                                                                          q
                                                                                                                                                                                                                                    g
                                                                                                                                           ö
                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                     ŏ
                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A PACA CAMENTAL CONTRACT OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDARD OF THE FIRST STANDA
```

```
/rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 3329-3396"
                                                                                                                           /rpt_type= INVERTED
/note= "inverted w.r.t. repeat at 3126-3243"
3487..3759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 6905-6965"
6905..6965
                                                                                                                                                                                            repeat at 3782-4070
                                                                                                                                                                                                                                 /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat 3487-3759"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "Inverted w.r.t. repeat 6567-6625"
7012..7075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= w
/note= "G>A, from allele n1286"
                                                                                                                                                                             /rpt_type= INVERTED
/note= "Inverted w.r.t.
3782..4070
                                                                                                                                                                                                                                                                                                                                                             /rpt_type= INVERTED /note= "Repeat 3" 5221.5330 /*tag= p
                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_type= INVERTED
/note= "Repeat 3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /rpt_type= INVERTED 6298..6537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_type= INVERTED
                                   /number= Intron_3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /number= Intron_5
5815..5942
                                                                                                                                                                                                                                                                                                                          Intron_4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Intron_6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Intron_7
number= Exon_3
                                                                                                                                                                                                                                                                                    /number= Exon_4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Exon_5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Exon_6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /number= Exon_7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /number= Exon_8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5761..5814
/*tag= r
                                               3126..3243
                                                                                                  ..3396
          3108..4302
                                                                                                                                                                                                                                                          4303..4634
                                                                                                                                                                                                                                                                                                  4635..5546
                                                                                                                                                                                                                                                                                                                                      4688..4719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6062..6138
                         ㅁ
                                                                                                                                                                                                                                                                                                                                                                                                                                            ..5760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5943..6297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ..6625
                                                                                                                                                                                                                                                                         /*tag= m
                                                                                                                                                                                                                                                                                                               *tag= n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /numper=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /number=
                                                                                                                                                                                                                                                                                                                           /number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'number=
                                                                                                                                                                                                                       /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              U05701.
US-897788.
                                                               /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23-DEC-1993.
14-JUN-1993; 1
12-JUN-1992; 1
                                                repeat_unit
                                                                                                    repeat_unit
                                                                                                                                                      repeat_unit
                                                                                                                                                                                                        repeat_unit
                                                                                                                                                                                                                                                                                                                                        repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                           repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO9325685-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mutation
          intron
                                                                                                                                                                                                                                                                                                   intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ntron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      intron
                                                                                                                                                                                                                                                                                                                                                                                                                                               exon
```

Mon Aug

```
Prepage Rabble Marganes cell death genes ced-3 and ced-4 - used to develop agents to increase or prevent cell death in organisms claim 14; Fig 4: 127pp; English.

The sequences given in 064735-45 represent mutations of the C. elegans ced-3 gene. A 2.8 kb mRNA was identified as the ced-3 transcript and was most abundant in embryos, but was also detected in larvae and young adults, suggesting that ced-3 is expressed not only in cells undergoing cell death. The four largest introns as well as sequences 5' of the characterised in non-coding regions of other C. elegans genes, such a fem-1, lin-12 and myob. The Ced-3 protein is 503 amino acids in cell on that might be a transmembrane region. One region of Ced-3 is highly hydrophilic with no significant hydrophobic region that might be a transmembrane region. One region of Ced-3 is very rich in serine. It is thought that this region of Ced-3 is protein interactions, similar to acid blobs in transcription factors. Of the mutations which occur within the ced-3 gene, eight of the mutations are missense mutations. These mutations establish the null phenotype of the ced-3 gene, confirming that ced-3 and ced-4 gene confirming that ced-3 and ced-4 gene confirming that ced-3 and ced-4 gene confirming that ced-3 and ced-4 gene confirming that ced-3 and ced-4 gene confirming that ced-3 and ced-4 gene confirming that ced-3 and ced-4 gene confirming that ced-3 and ced-4 gene confirming that ced-3 and ced-4 gene confirming that ced-3 and ced-4 gene ced-3 dependentive disease, tranmatic brain injury, hypoxia, pathogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tttaaccttggtttttgcattgtttcgtttaaaaaaaccactgtttatgtgaaaaacgat 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tagittiactaataaaactactittaaacctitacctitacctcaccgctccgtgttcatg 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541 gctcatagattttcgatactcaaatccaaaaataaatttacgagggcaattaatgtgaaa 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421 TITAACCIIGGITITIGCATIGIIICGIIIAAAAAAACCACIGIIIAIGIGAAAAACGAI 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tttagcagaattaatcttgtttcagaaaaagtccagttttctagattttccgtctta 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gttcgaacattcgtgttgttgtctccttttccgttatcttgcagtcatcttttgtcgttt 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTTCGAACATTCGTGTGTTGTGCTCCTTTTCCGTTATCTTGCAGTCATCTTTTGTCGTTT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ttttetttgttettttgttgaacgtgttgetaageaattattaeateaattgaagaaaa 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITICITIGITCTTTTTGTTGAACGTGTTGCTAAGCAATTATTACATCAATTGAAGAAAA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 TITAGCACAAITAAICTIGIIICAGAAAAAAGICCAGIIIICIAGAITIITCCGICIIA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ttgtcgaattaatatccctattatcactttttcatgctcatcctcgagcggcacgtcctc 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 TIGICGAATTAATATCCCTATTATCACTITTTCATGCTCATCCTCGAGCGGCACGTCCTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 agatctgaaataaggtgataaattaataaattaagtgtatttctgaggaaatttgactgt 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 AGATCTGAAATAAGGTGATAAATTAATAAATTAAGTGTATTTCTGAGGAAATTTGACTGT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 7126; DB 9; Length 7653;
Pred. No. 0.00e+00;
0; Mismatches 17; Indels 0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481 TAGITIACTAATAAAACTACTITIAAACCTITAACCTITACCTCACCGCTCCGTGTTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1271 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1453 C;
                 (MASI ) MASSACHUSETTS INST TECHNOLOGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               infection, aging or hair loss.
Sequence 7653 BP; 2430 A;
                                            Shaham S, Yuan J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 93.1%;
Best Local Similarity 99.8%;
Matches 7636; Conservative
20-NOV-1992; US-979638
                                          Horvitz HR, Shahan
WPI; 94-007542/01.
                                                                                         P-PSDB; R53284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
```

```
1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1261 atttatogtaaaattatgataatagcaccgaaaactactaaaaatggtaaaagctocttt 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1261 ATTTATCGTAAAATTATCATAATAGCACCGAAAACTACTAAAAAATGGTAAAAAGCTCCTTT 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            taaatcggctcgacattatcgtattaaggaatcacaaaattctgagaatgcgtactgcgc 1380
                                                                                                                                                                                                                                                                                                                                                                                            ttgctgctgctacaatccactttctttttctcatcggcagtcttacgagcccatcataaac 1080
                                                                                                                                                                                                                                                                                                                                                                                                           tttttttccgcgaaatttgcaataaaccggccaaaaactttctccaaattgttacgcaa 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                               tatatacaatccataagaatatcttctcaatgtttatgatttcttcgcagcactttctct 1200
                                                                                                                                                                                                                                                                                                                                         cacctgtctccgtctcaattatcgtttagaaatgtgaactgtccagatgggtgactcata 1020
                                                                                                                                                                                                                                                                                                                                                                   961 CACCIGICICCGICICAATTAICGITIAGAAAIGIGAACIGICCAGAIGGGIGACICAIA 1020
                                                                                                                                                                                                         840
                                                                                                                                                                                                                                                                                                               GICGICCTIGGIAICCICAACTIGICCCGGITTIGITITCGGIACACTCTICCGIGAIGC 960
                                                 CAAAAACAATCCTAAGATTTCCACATGTTTGACCTCTCCGGCACCTTCTTCCTTAGCCCC 660
                                                                           accactccatcacctctttggcggtgttcttcgaaaaccacttaggaaagcagtgtgtat 720
                                                                                                                             ctcatttggtatgctcttttcgattttatagctctttgtcgcaatttcaatgctttaaac 780
GCTCATAGATTTTCGATACTCAAATCCAAAAATAAATTTACGAGGCAATTAATGTGAAA 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gctacgacatattttgcgcgccaaatatgactgtaatacgcattctctgaattttgtgtt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCIACGAGATATTTTGCGCGCCAAATATGACTGTAATACGCATTCTCTGAATTTTGTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                aacatatttgacggcaaaatatctcgtagcgaaaactacagtaattctttaaatgactac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1381 AACATATTTGACGGCAAAATATCTCGTAGCGAAAACTACAGTAATTCTTTAAATGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tgataacccgtaaatcgtcacaacgctacagtagtcatttaaaggattactgtagttcta
                                                                                                                                                                                                                                    tegtgtgctaacatettatttttataatattteegetaaaatteegatttttgagtatta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              caaaaacaatcctaagatttccacatgtttgacctctccggcaccttcttccttagcccc
                                                                                                     661 ACCACTCCATCACCTCTTTGGCGGTGTTCTTCGAAACCCACTTAGGAAAGCAGTGTGTAT
                                                                                                                                             aatccaaatcgcattatttgtgcatggaggcaaatgacggggttggaatcttagatga
                                                                                                                                                                                                 1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1441
                                                                                                                                                                                                                                                                                                                                             961
                                                                                                                                                                                                                                                                                                                                                                                                  1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1141
                                                                                                                                                                                                                                        841
                                                                                                                                                                                                                                                                                            901
                                                                                                                                                                                                                                                                                                                     901
                                                                               661
                                                                                                                                                            721
                                                                                                                                                                                      781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                           g
                                                     δ
                                                                            g
                                                                                                         ŏ
                                                                                                                                  g
                                                                                                                                                           δ
                                                                                                                                                                                     d
                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                     dd
                                                                                                                                                                                                                                                                  οy
                                                                                                                                                                                                                                                                                           엄
                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                        Q
```

5 8 8 9 7 7 8 8 8 9 7 7 7 8 8 8 9 7 7 7 8 9 8 9

61 attttcgtgggcaaaaggcc 61 attttcgtgggcaaaaggcc 61 attttcgtcgccCaAAaGGCC 62 attTTCGTGGCGCAAAAGGCCAAGGCAAGGCAAGGCAAGGC	attttgtagatttgccgaaaatacttgtcacacacac 2	cetttttccagtgttgactcgaatgctgtcgaattcga 28	88	ogteggageegegea 	danadodfotototoadatoatoatoatoatotatos 300	8	totogitotogatogogigoacitoattoatoggatog 306	9	agtcaacgcatttcccagccaaccttgtatgttgatgcg 3120 	NTO 000 1400 1400 1400 1400 1400 1400 1400	9-arcac-caac-arc-goggygaadaacccggagc 3180 3-arcac-caac-arc-goggygaadaacccggagc 3180 3-artactcaacatatttgacgcgcaaatatctcgtagc 3180	in the state of th		tgacaacgaattttaatttgtcatttttgtgttttctt 330	TGACAACGAATTTTAATTTGTCATTTTTGTGTTTTTCT	aaattatttccgtaaacagacaccagcggtacagtact 3360 			tgccaaaacgctttttcaagtttcgcagatttttga 348	TGCCAAAACGCTTTTTTCAAGTTTCGCAGATTTTTTG	tattaacacatataattatcattaatqtgaatttcttg 3540 	ctagtatgctctacttttgaaattgctcaacgaaaaa 360		tgaccaaaaatagcaattttttatatattttcco	rgacgaaaatagcaattttttatatattttccctat 366	aaaaaagcgcatgcattttcgacatttttacatcga 3720	AAAAAAGGGATGCATTTTTCGACATTTTTTACATCG	gaagacgagagacgcggagaaataccacacatctttct 3780 	aaatgggatctcggtcgatgtaaaaaaatgtcgaata	GAAATGGGATCTCGGTCGATGTAAAAAATGTCGAATA 3840
2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	1 attttcgtggcgcaaaaggc 	21 acacacatctccttcaaata		1 gtgtccaatgtcaccggcaa 	1 ttcaccgacccgagttcacg	41 TTCACCGACCCGAGTTCACC	1 ggatatctactcaagagcaa	GGATATCTACTCAAGAGCAA	61 acacaattattcatctcctcc 		21 AACACTAAATTCTGAGAATG	81 gaaaaatacagtaaccettt	81 GAAAATACAGTAACCCTTT	41 aaacgaatatatgctcgaatt	41 AAACGAATATATGCTCGAATT	01 ttgatatttttgatcaattaa 	61 cttttaaagagttagagtagt	61 CTTTTAAAGAGTTACAGTAGT	21 tgaaaaaaaatcatctaacat	1 TGAAAAAAATCATCTAACAT	ttttttcattcaagatatg 	tagaaattttgggcttttcgt	TAGAAATTTTGGGCTTTTTCGT	tcatgtggtttgttcatat	TCATGTGGTTTGTTCATAT	1 tcatgttgtgcagaaaaatag	1 TCATGTTGTGCAGAAAATAG	acgacagctcacttcacatgc 	gcgtctctcgtcttcagcatg	GCGTCTCTCGTCTTCAGCATG

Db 3841 atgtaaaaaatgcatgcgtttttttacacttttctgcacaaatgaataggggaaaatgt 3900

	aatacattttttgtatttttcaacatcacatgattaaccccattatttttcgtt 3960 	acttaaaaagtagagaatattagagcgaaaccaaaatttcttcagatattacc 4020 	tgataattatagatgttaataagcatatcttgaatgaaagtcagcaaaaatatgt 4080 	acacctgaaaaaaatcaaaaattctgcgaaaattgaaaaatgcattaaaataca 4140 	gcatttttctacatcatgaatgtagaaaattaaaaggaaatcaaaatttcta 4200 	tataattgaatgaaacattgcgaaattaaaatgtgcgaaacgtcaaaaagagga 4260 	gggtatcaaaatcgatcctaaaaccaacaattcagcatccgccaactcttcat 4320 	ggatgetettetetoggatacagttcaagtcgtaatcgeteattcagcaagett 4380 	occaettcaatacatattccatgaagagatatgaactttgtcgatgcaccaacca	ocgigiticgacgagaaaaccaigtacagaaacticicgagiccicgiggaaigt 4500 	catcataaataatgaacactttgagcagatgccaacacggaatggtaccaaggccg 4560 	ggacaatcttaccaatttgttcagatgcatgggctatacggttatttgcaaggaca 4620 	gacgggaagggtacggcgaaattatattacccaaacgcgaaatttgccattttgcg 4680 	aaatgtggcgcccggtctcgacacgacaatttgtgttaaatgcaaaaatgtataa 4740 	caaaaaacaaaattttgaacttccg 	tttcoggctacattatgtgttttttcttagtttttctataatatttgatgtaaaaa 4860 	tttgtaaattttcagacaattttccgcatacaaaacttgatagcacgaaatcaatt 4920 	gaattttcaaaattatccaaaaatgcacaatttaaaatttgtgaaaattggcaaac 4980
AAAATGC	cat CAT	ttaa TTAA	gataat GATAAT	cacctg CACCTG	catttt CATTTT	ataatt ATAATT	ggtato GGTATC	accggatgct 	caactc CAACTC	gtgttt GTGTTT	atcat ATCAT	acaatc ACAATC	atctgacggg 	ccgaaaatgtg CCGAAAATGTG	tttgcaaaaaa TTTGCAAAAAA	gtttttccgg 	accgtttgtaa 	ttctgaatttt
3841	3901	3961	4021	4081	4141	4201	4261		4381	4441	4501	4561	4621	99	47	4801	4861	4921
QY	g S	g y	Db Qy	do y	g &	da y	d o	g 5	g &	Oy Oy	do yo	da Qy	oy Oy	d y	7 A &	g &	da yo	qa

TTGT cacto	aatcgattttaaaaatatcc 5220	CTTCGABABGC CTTCGABABGC GTCCCABBBB GGTCCCABABA CTCCCAAAAA TTCCCAGCCTT TTCCCAGCCTT		ttgtgcaggcttgtcgaggcg 5760	tggatgtgtgcggcaagttc 5940
TTCTGAATTTTCAAAATTATCCAAAAATGCACAATTTAAAAT. ggtgtttcaatatgaaatgtatttttaaaaactttaaaaaacci	ILLTLTLTABCBABTOGGGBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB	gocaataaacttcctaatcaccaaaagtaaaattg 	gtaaactgatatttaatttccagggaatgctcctg 	ocgaaaatcgttt	gatgggacaatcgagacgggccattgttcaattttctt
4921 4981 4981 5041 5101	5161 5161 5221 5221 5281	34 34 40 40 40	52 52 58 58 64	5701 5701 5761 5761 5821	5881 5941 5941 6001
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q		Db Oy Oy Oy	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

ca 11-t CG-03	30 36 42 42	aag 6480 AAG 6480 gta 6540 GTA 6540 cct 6600 CCT 6600	itt 6660	CAÀ 6840 att 6900 6900 ctt 6960 ctt 6960 CTT 6960 ATC 7020 ATC 7020	rc 708 11 708 17 714 18 714
9gattggtttgaaagtggg 		9ctgctgaatgaagtcaataag 	ittttagctaaaatgattgat 	AGGGAAATTACATCAACCAT aattcaaagttgtccacgagt	cacgaaactctgccgtctaaaat.
ccaatcagcatcgtcgatctccgcccacttc 		cgacacacgcaaaggatatggatgttgttg 	caagcctgccgcgtcaacctagaatttt	AATTTATCGATTTTTAAATG taagccaaattgttaactce 	ctgctcaaaagttctacttttggccggaag
1 aaa 1 AAA 1 AAA 1 9t9 1 GTG 1 aaa 1 AAA 1 99a	1 GGA 1 GGA 1 GTG 1 CTG 1 Late	1 ttct. 1 1101 1 1101 1 GTCGG 1 Cttg.	tttg 	gcat 	CCGCC CCGCC actcc
606 606 612 612 618 618 624:	36 36 36	4 4 80 80 4 4	6601 6601 6661 6721 6721 6781		7021 7021 7081 7081
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	64 G G G G G G G G G G G G G G G G G G G	\$ 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	90 OX

```
gtttgtgtctcgaacgcataataattttaataactcgttttgaattgattagttgttgt 7320
                                                                                                                                                                       7500
                                                                                                                                                                                                                           7141 ccaattagtttaaaaccatgtgtatattgttatcctatactcatttcactttatcattct
                               atcatttctcttcccattttcacacatttccatttctacgataatctaaaattatgac
                                                                                                                                                              ttaacctattttttcgccacaaaaaatctaatatttgaattaacgaatagcattcccatc
                                                                                                                                                                                             tctcccgtgccggaatgcctcccggccttttaaagttcggaacatttggcaattatgtat
                                                                                                                                                                                                                                                                                                                064442;
23-JUN-1994 (first entry)
ced-3 (C6434T) gene.
C. elegans; ced-4; ced-3; mutant; transcriptional regulation; embryogenesis; cell death; hydrophilic; transmembrane; region; hydrophobic; mutation; amino acid; substitution; RNA splicing; protein synthesis; null phenotype; calcium-binding domain; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_type= INVERTED
/note= "inverted w.r.t. repeat at 1356-1472"
2232..2366
                                                                                                                                                                                                                                                                                                                                                                                                           /rpt_type= INVERTED
/note= "Inverted w.r.t repeat at 1490-1614"
1490..1614
                                                                                                                                                                                                                                                           Location/Qualifiers
1356..1472
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Intron_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'number= Intron_2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /number= Exon_1
2367..2429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Exon_2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Exon_3
                                                                                                                                                                                                                                                                                                   JT 5
Q64742 standard; DNA; 7653 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag= g
/number= Ex
3108..4302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2450..2575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2576..2853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2854..3107
                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ′*tag= d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag= e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'number=
                                                                                                                                                                                                                                                                                                                                                                                           repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                intron
                               7201
                                                                7261
                                                                                               7321
                                                                                                              7321
                                                                                                                                                              7441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               intron
                                                                                                                                                                                             7501
                                                                                                                                                                                                                                                                                                                                                                                                                                                           exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        exon
                                                                                                                                                                                                                                                                                                   RESULT
                              g
                                              ò
                                                              g
                                                                              ò
                                                                                            Dp
                                                                                                             οy
                                                                                                                             g
                                                                                                                                                            g
                                                                                                                                             δ
                                                                                                                                                                             δ
                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                            Qγ
                                                                                                                                                                                                                           Db
                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                            ŏ
```

```
rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 6905-6965"
                 /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 3329-3396"
3329..3396
                                                    rpt_type= INVERTED
note= "inverted w.r.t. repeat at 3126-3243"
                                                                                   rpt_type= INVERTED
note= "Inverted w.r.t. repeat at 3782-4070'
                                                                                                                                                                                                                                                                                                                                                                                                     /*tag= w
/note= "C>T, from allele n1129 and n1164"
6538..7012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpt_type= INVERIED
note= "Inverted w.r.t. repeat 6567-6625'
                                                                                                                   rpt_type= INVERTED
note= "Inverted w.r.t. repeat 3487-3759'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (MASI ) MASSACHUSETTS INST TECHNOLOGY. Horvitz HR, Shaham S, Yuan J;
                                                                                                                                                                                                                                rpt_type= INVERTED
note= "Repeat 3"
547..5760
                                                                                                                                                                                                                                                                                                                                                             /rpt_type= INVERTED 6298. 6537
                                                                                                                                                                                                rpt_type= INVERTED
                                                                                                                                                                                                                                                                                                                                     'number= Intron_6
                                                                                                                                                                                                                                                                                                                                                                                                                                    'number= Intron_7
                                                                                                                                                                         'number = Intron_4
                                                                                                                                                                                                          "Repeat 3"
                                                                                                                                                                                                                                                                                        number = Intron_5
'number= Intron_3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /number= Exon_8
                                                                                                                                                                                                                                                                                                              'number= Exon_6
                                                                                                                                                                                                                                                                 Exon_5
                                                                                                                                                                                                                                                                                                                                                                                     'number= Exon_7
                                                                                                                                                   'number= Exon_4
                                                                                                                                                                                                                                                                                                                                                                                                                                      In
_/..6625
/*tag=
'rr+
                                                                                                                                                          4635..5546
/*tag= n
                                                                                                                                                                                                          'note= "Rep
3221..5330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .7075
                                                                                                                                                                                                                                                                                                                                            6062..6138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ..6965
       3126..3243
                                                                     3487..3759
                                                                                                  ..4070
                                                                                                                                  .4634
                                                                                                                                                                                  1688..4719
                                                                                                                                                                                                                                                                       761..5814
                                                                                                                                                                                                                                                                                               815..5942
                                                                                                                                                                                                                                                                                                                     5943..6297
                                                                                                                                                                                                                                                                                                                                                                                                                            *tag= x
                                                                                                                                                                                                                         *tag= p
                                                                                                                                                                                                                                                           ਠਾ
                                                                                                                                                                                                                                                                                                                               /*tag= t
                                                                                                                                            *tag= m
                                                                                                                                                                                                                                                                 _numper=
                                                                                                                                                                                                                                                                                                                                                    /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14-JUN-1993; U05701.
12-JUN-1992; US-897788.
20-NOV-1992; US-979638.
               /*tag=
                                                                                                                                                                                                                                                          *tag=
                                                            note=
                                                                                                                                                                                                                                                                                                        *tag=
                                                                                                                                                                                                                                                                                                                                                                              *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag=
                                                                                                                                                                                          *tag=
                                              /*tag=
                                                                             *tag=
                                                                                                                                                                                                                                                                                                                                                                                            6434
                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  409325685-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         33-DEC-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_unit
       repeat_unit
                                                                                                                                                                                    repeat_unit
                                                                                                                                                                                                                   repeat_unit
                                      repeat_unit
                                                                      repeat_unit
                                                                                                     repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                             mutation
                                                                                                                                                                                                                                                                                                                                                                                                                      intron
                                                                                                                                                           intron
                                                                                                                                                                                                                                                                         intron
                                                                                                                                                                                                                                                                                                                        intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            exon
                                                                                                                                                                                                                                                  exon
                                                                                                                                                                                                                                                                                                                                                                       exon
                                                                                                                                                                                                                                                                                                 exon
```

```
Figure 14. Figure 15. Per Figure 15. Per Figure 15. Per Figure 14. Figure 14. Figure 14. Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 15. Per Figure 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gotcatagattttcgatactcaaatccaaaaataaatttacgagggcaattaatgtgaaa 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421 TITAACCTIGGITITIGCAITGITICGITIAAAAAAACCACTGITIAIGIGAAAAAACGAI 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 ttgtcgaattaatatccctattatcactttttcatgctcatcctcgagcggcacgtcctc 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 AGAICTGAAATAAGGTGATAAATTAATAAATTAAGTGTATTTCTGAGGAAATTTGACTGT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 7126; DB 9; Length 7653;
Pred. No. 0.00e+00;
0; Mismatches 17; Indels 0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 agatctgaaataaggtgataaattaataaattaagtgtatttctgaggaaatttgactgt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tttaaccttggtttttgcattgtttcgtttaaaaaaaccactgtttatgtgaaaacgat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ggotogocgatttattgctgccagaaagattctgagattctcgaagtcgattttataata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tagtttactaataaaactacttttaaacctttacctttacctcaccgctccgtgttcatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2500 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1272 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1452 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               infection, aging or hair loss.
Sequence 7653 BP; 2429 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 99.8%;
Matches 7636; Conservative
94-007542/01.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δŽ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            පු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
òγ
```

601 caaaaacaatcctaagatttccacatgtttgacctctccggcaccttcttccttagccc 660

Mon Aug 9 13:54:55 1999

	gtgtat 72: GTGTAT 72:	ttcaatgctttaaac 78 TCAATGCTTTAAAC 78	tggaatcttagatga 84 	tttcatcattttcct 90	TTCATCATTTTCC actcttccgtgatg	ACTCTTCCGTGATGC 96	gatgggtgactcata 1020 	gagcccatcataaac 108	Gasttattacces 110	CAAATTGTTACGCAA 11	cgcagcactttctct 1200 	gatttttgagtatta 1260 	ggtaaaagctccttt 132	GGTAAAAGCTCCTTT 132	gdargegractgege 1380 	tctttaaatgactac 1440 TCTTTAAATGACTAC 1440	ttttttttcgaatt 1500 	ttactgtagttcta 156	TTACTGTAGTTCT	tctgaattttgtgtt 1620 CTGAATTTGTGTT 1620	caggatttattcca 168	CAGGATTTAT	ttgcattttaattc 1740
		9gtatgetetttegattttatagetetttgtegeat: 	gtgcatggaggcaaatgacgggg 	tcattttgtaccac	JULITURGGGTAAACGCCCGGTTCATTTTGTACCAC tggtatcctcaacttgtcccggttttgttttcggta		ctccgtctcaattatcgtttagaaatgtgaactgtcca 	atccactttctttctcatcggcagtctta	concomment to contract and contract the contract to the contract to the contract and contract the contract to the contract	TCCGCGAAATTTGCAATAAACCGGCCAAAAACTTTCTC	aatccataagaatatcttctcaatgtttatgatttctt 	ctaacatcttattttataatatttccgctaaattcc 	taaaattatgataatagcaccgaaaactactaaaaa 	innoiloicainaideathaadha i Alimhadh Ctoacatatathaadhaathaanaaatha	9	aaatatctcgtagcgaaaactacagtaat 	9tgtcgatttacgggctcaatttttgaaaataatt 	cgtaaatcgtcacaacgctacagtagtcatttaaagg	CGTAAATCGTCACAACGCTACAGTAGTCATTTAAAGG	JCatto CATTC	atttcacaagattttggcattccactttaaaggcgc	AATTTCACAAGATTTTGGCATTCCACTTTAAAGGGGG	gggcacggaaaagtttgatagactttaaattctcc
CAAAAAC	accactc ACCACTC	ctcattt CTCATTT	aatccaa AATCCAA	gatcagg	ATCAGG	GTCGTCC	cacctgt CACCTGT	ttgctgc 	tttt	TTTTTT	tatataca TATATACA	tegtgtg TCGTGTG	atttatco	agatog	TAAATCGC	aacatatt AACATATT	tgtagege TGTAGEGG	ataac	GATAAC	gctacgac 	ccgtaa	CCGTAA	atgggtct
. 601	661	721	781	4 .	901	901	961	1021	80		1141	1201	1261	32	i m	1381	1441	20	1501	1561	1621		1681
δ	Oy Oy	9 %	Db Qy	qa d	8 8	Øγ	g &	g &	7 B	ογ	Dp Qy	oy Oy	g ò	; a	δ	oy Oy	do yo	QQ	ò	g %	QQ	ογ	g

2y 168 Db 174	1 AIGGGICTCGGCACGCAAAAGTIIGAIAGACTTIIAAAIICTCCCIIGCAITTIIAAIIC 17. 1 aattactaaaattttgqtaattittctgtiaaaatiiitaaaattaaattaaaatt
	AATIACIAAATITICGEGAATITITICGETAAAATITITAAAATCAGITICGAATTI 180
180	11 ttccaggctgacaaacagaaacaaaaacacaacaaacatttaaaaatcgttttcaaat 1860
186	1 taaaaataacgatttotcattgaaaattgtgttttatgtttgccaaaataaagggaact 19:
Db 192 Qy 192	gattcaaaacaatttaacaaaaaaaaccccaaaattcgccagaaatcaagataaaaa 1980
Db 198 Qy 198	1 ttcaagaggtcaaaattttccgattttactgactttcacctttttttt
Db 204	1 gcagttgttggagtttttgacgaaactaggaaaatcgataaaaattactcaaatcg 210
Db 210 Qy 210	1 agctgaattttgaggacaatgtttaaaaaaaacactatttttccaataatttcactcat 2160
Db 216	1 tttcagactaaatcgaaaatcaaatcgtactctgactacggctcagtagagaggtcaacc 2220
Db 222 Qy 222	1 atcagccgaagatgatgcgtcaagatagaaggagcttgctagagaggaacattatgatgt 2280
Db 228	1 tototagtoatotaaaagtogatgaaattotogaagttotoatogoaaacaagtgttga 2340
234	1 atagtgataatggagatatgattaatgtgagtttttaatcgaataatattttaaaaaa 2400
240	aattgataatataaagaatattttgcagtcatgtggaacggttcgcgagaagagacggg 2460
246.	1 agatogtgaaagcagtgcaacgacgggagatgtggcgttccacgcgtttatgatgctc 2520
252.	1 ttggetetaegggaeaeggaettgetgaagttettgaagetetegeeagategtagg 2580
258.	aaaagaggccgatcgtaattt 264
264	oggaaattatgcactttoccaaatat 270
2701 2701 2761	tgaagtgaaatattttatttactgaaagctcgagtgattatttat
76	ATTITCGTGGCGCAAAAGGCCATTITGTAGATTIGCCGAAAATACTIGTCACACACACAC

8 8 4 4 0 0 0 9 0 0 0 0 0 0 0	0 0 0 0 4	300 300 360 420 420 420 420 420 420 420 420 420 42	4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	720 720 780 780 840 900
acacacatctccttcaaatatcccttttccagtgttgactcgaatgctgtcgaattc 	GGATATCTCAAGAGGAGAGATCTCTCTTTTTTTTTTTTT	GARMARIA MARCELITIA ANTIGATIO INCIDITA CONTITUE GARMARIA MARCELITA CONTITUE GARMARIA MARCELITA CONTITUE GARMARIA MARCELITA CONTITUE GARMARIA MARCELITA MATTITUE GARMARIA MARCELITA MATTITUE MARCELITA GARMARIA MARCELITA GARMA	tgaaaaaaatcatctaacatgtgccaaaacgcttttttcaagtttcgcagattttttga 3	tcatgttgtgcagaaaatagtaaaaagcgcatgcatttttcgacattttttacatcga 3
2821 2821 2881 2881 2941 2941 3001	000 06 12 18	3241 3241 3301 3301 3361	3421 3481 3481 3541 3541 3601	3661 3651 3721 3721 3781 3781 3841
6		6 6 6 6 6 6	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 6 6 6 6 6

qa :	3901	attaaaatacattttttgtatttttcaacatcacatgattaaccccattatttttcgtt 3960
g d	96	inammineniiiiisiniiiiteeniiiitemenienenimineenen ja ja ja ja ja ja ja ja ja ja ja ja ja
QY	96	
qo d	7 7	0
à f		TIAITGATAATTALAGATGITAATAAGCATAICITGAATGAAAGICAGCAAAATATGI 408 caaacacattaaaaaaattaaaaaattotacaaaattotaaaaaataaa 414
QY	4081	GCGAAACACCTGAAAAAATCAAAAATTCTGCGAAAATTGAAAAATGCATTAAAATACA 4140
qq		ttctacatcacatgaatgtagaaaattaaaagggaaatcaaaaatttcta 420
Qy		TITIGCATTITICTACATCACATGAATGTAGAAATTAAAAGGGAAATCAAAATTICTA 420
QQ	0	tgaatgaaacattgcgaaattaaaatgtgcgaaacgtcaaaaaagagga 42
٥y	4201	aggatataattgaatgaaacattgcgaaattaaaatgtgcgaaacgtcaaaaaaagagga 426
ପ୍ର	9	aaaatcgatcctaaaaccaacacatttcagcatccgccaactcttcat 432
δy		TTGGGTATCAAAATCGATCCTAAAACCAACATTTCAGCATCCGCCAACTCTTCAT 432
qq	32	38
δy		CACCGGATGCTCTTCTCTCGGATACAGTTCAAGTCGTAATCGCTCATTCAGCAAAGCTT 438
අු	38.	ctggaccaactcaatactattccatgaagagatatgaactttgtcgatgcaccaacca
δλ	œ	IGGACCAACICAAIACAIAIICCAIGAAGAGGAIAIGAACIIIGICGAIGCACCAACCA
g	4	20
Qy	4	aagccgtgttttcgacgagaaaccatgtacagaaacttctcgagtcctcgtggaatgt 450
QQ	4501	taatgaacactttgagcagatgccaacacggaatggtaccaaggccg 456
Qγ		ccicalcataaataaacactitgagcagatgccaacaggaatggtaccaaggccg 456
qa	Ö	acaaggacaatcttaccaatttgttcagatgcatgggctatacggttatttgcaaggaca 4620
δÿ	4561	CAAGGACAATCTTACCAATTIGITCAGAIGCAIGGGCTATACGGTTATTIGCAAGGACA 462
qq	4621	8
Qγ	4621	TCTGACGGGAAGGGTACGGCGAAATTATATTACCCAAACGCGAAATTTGCCATTTTGCG 46
qq		acaatttgtgttaaatgcaaaaatgtataat 474
δλ	4681	CGAAAATGTGGCGCCCGGTCTCGACACGACAATTTGTGTTAAATGCAAAAATGTATAAT 474
QQ	4741	gaacttccgcgaaaatgatttacctagtttcgaaattttc 480
Οy		TIGCAAAAAACAAATTTTGAACTTCCGCGAAAATGATTTACCTAGTTTCGAAATTTT
qq	4801	ttttttccggctacattatgtgttttttcttagtttttctataatatttgatgtaaaaa 486
Qy		ITTICCGGCIACATIATGIGITTITTTCTTAGTTTTTCTATAATATTTGATGTAAAAA 486
QQ	4861	gtttgtaaattttcagacaattttccgcatacaaaacttgatagcacgaaatcaatt 49
QY		CCGTTTGTAAATTTTCAGACAATTTTCCGCATACAAAACTTGATAGCACGAAATCAATT 492
Ωp	4921	œ
Qy	4921	TCTGAATTTTCAAAATTATCCAAAAATGCACAATTTAAAATTTGTGAAAATTGGCAAAC 49
QQ	4981	ggtgtttcaatatgaaatgtatttttaaaaactttaaaaaccactcoggaaaagcaataa 5040

0	0 0	0 0	0 0	0 (٠	
504(5100	516(522(28	34.8	5340	4 0	5460	, (5520 5520	5580 5580		5640	5700	vo vo	82	5820	5880	94	94	6000	9	90	6120
	aaatcaaaacaacgtcacaattcaaattcaaagttattcatccgatttgtttatttttg 	caaaatttgaaaaaatcatgaaggatttagaaaagttttataacattttttctagatttt 	tcaaaatttttttaacaaatcgagaaaagagaatgaaaatcgattttaaaattcc 	acagcttcgagagtttgaaattacagtactccttaaaggcgcacaccccattgcattgg	cociicomensiisanniincheinciiciinhamusecachecearaisa ccaaaaatttgtogtgtogagaccaggtaccgtagtttttgtcgcaaaattgcacca 	CCAAAAAIIIGICGICGICGAGGCCGGGIACCGIAGIIIITTGICGCGAAAAAIIGCACA gggggataaaccttcctaatcaccaaaaaaaaaaaaaaa		attcaaaaaaaagtcgaatttcgatttttttttggttttttggtcccaaaaccaaa 		aaarcaarttcccagcataarcaaaagaaacccgaaaaatttcccagcctgttcct 	aatgtaaactgatatttaatttccagggaatgctcctgacaattcgagactttgccaaac 	tgcgatactcgtgattctatcacacggagaagaga	CGAATCACACGGAGATTCTGCGATACTCGTGATTCTATCACACGGAGAAGAGATGTG	ttattggagttgatgatataccgattagtacacacgagatatatgatcttctcaacgcgg 	ataagccgaaatcgtttttgtgcaggttgtcgaggo 	ttattttaattttaatataaatattttaaataaattcattttcagaacgt	TTCGTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	gtgacaatggattcccagtcttggattctgtcgacggagttcctgcattcttcgtcgtg	atgggacaatcgagacgggccattgttcaattttcttggatgtgtgcggccgcaagtt	CGGGCCATTGTTCAATT	aggttgcaatttaatttcttgaatgagaatattccttcaaaaaatctaaaatagattttt 	ttccagaaattccccatcaaaaattacaataaataaattataaaaata	ATTCCAGAAAGTCCCGATCGAAAAATTGCGATATAATTACGAAATTTGTGATAAAATGAC	aaaccaatcagcatcgtcgatctccgcccacttcatcggattggtttgaaagtggggggga
4981	5041	5101	5161	5221	9 60	5341	34	5401	4	5461	5521 5521	5581	5581	5641	5701	5761	5761	5821		5881	5941	0	00	6061
0y	oy op	do yo	Oy Oy	go :	2 8 8	2 5	6y	og og	:	o v	ga &	qq	δ	qa <i>i</i> y	oy Oy	qq	δλ	do yo	QQ	δ	qa ò	; <u>8</u>	Qy	g.,

AAACCAATCAGCATCGTCGATCTCCGCCCACTTCGATTGGTTTGAAAGTGGGCGGA gtgtggagaaagaagccgagccaagctgacattctgattcgatacgcaacgacagctcaa cttgaaacaaacaatgcatgtctaacttttaaggacacagaaaaataggcagaggctcct ccagtaaaaaaatctttattagccattggattttactgaaaacgaaaatttgtagtttttc gtgaattgctgattggtcgcagttttcagtttagagggaatttaaaaaatcgccttttcga aacgaaatttatcgatttttaaatgtaaaaaaaaaatagcgaaaattacatcaaccatcaa ccaattagtttaaaaaccatgtgtatattgttatcctatactcatttcactttatcattct δŻ do Db Qy g oy Oy Oy 0y 0y 0b QY Db οy g g g ò QΥ

δŽ

```
Isolated C elegans cell death genes ced-3 and ced-4 - used to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 6905-6965"
                                                          /rpt_type= INVERTED
/note= "inverted w.r.t. repeat at 3126-3243"
                                                                                                            /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 3782-4070"
3782..4070
/rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 3329-3396'
3329..3396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat 6567-6625"
7012..7075
                                                                                                                                                                         /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat 3487-3759"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag= w
/note= "G>A, from allele n2426"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (MASI ) MASSACHUSETTS INST TECHNOLOGY.
HORVILE HR, Shaham S, Yuan J;
WPI: 94-007542/01.
P-PSDB; R53287.
                                                                                                                                                                                                                                                                                                                                                                      /rpt_type= INVERTED
/note= "Repeat 3"
5547..5760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt_type= INVERTED 6298..6537
                                                                                                                                                                                                                                                                                                                  /rpt_type= INVERTED
/note= "Repeat 3"
5221..5330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag= r
/number= Intron_5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Intron_6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Intron_7
                                                                                                                                                                                                                                                               /*tag= n
/number= Intron_4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /number= Exon_8
                                                                                                                                                                                                                                                                                                                                                                                                                                       Exon_5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Exou_6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'number= Exon_7
                                                                                                                                                                                                                                 'number Exon_4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11.
/*tag= v
/rpt
                                                                                                                                                                                                                                                                                     4688..4719
/*tag= o
                                                                                  3487..3759
/*tag= k
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ..6965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5815..5942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /number= Ex
5943..6297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6062..6138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ..7012
                                                                                                                                                                                                    .4634
                                                                                                                                                                                                                                                                                                                                                                                                                                                5761..5814
                                                                                                                                                                                                                                              1635..5546
                                                                                                                                                                                                                                                                                                                                                                  Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J
                                                                                                                                                                                                                      E
                                                                                                                                                                                                                                                                                                                                                                                                                           σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /*tag= s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag= x
                                                                                                                                                                                                                                                                                                                                                                                                                                     /number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /number=
                                                                                                                                                                                                                                                                                                                                                                  /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-DEC-1993.
14-JUN-1993; U05701.
12-JUN-1992; US-897788.
20-NOV-1992; US-979638.
                                                                                                                                                               /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag=
                                                                                                                                                                                                                      /*tag=
                                              /*tag=
                                                                                                                                                                                                    4303.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9325685-A.
                                                                                                                                                                                                                                                                                          repeat_unit
                                                                                                                                                                                                                                                                                                                                                 repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_unit
                               repeat_unit
                                                                                                                                              repeat_unit
                                                                                       repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  intron
                                                                                                                                                                                                                                                 intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                      intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              exon
                                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                                                                                                                             exon
      PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT OF THE PER TERMENT O
                                                                                                                               7441 ttaacctattttttcgccacaaaaatctaatatttgaattaacgaatagcattcccatc 7500
                   7201 atcatttctcttcccattttcacacatttccatttctctacgataatctaaaattatgac 7260
                                                                                                      7261 GTTTGTGTCTCGAACGCATAATAATTTTAATAACTCGTTTTGAATTTGATTAGTTGTTGT 7320
                                                                           064744;
23-JUN-1994 (first entry)
ced-3 (6556A) gene.
C. elegans; ced-4; ced-3; mutant; transcriptional regulation; embryogenesis; cell death; hydrophilic; transmembrane; region; hydrophobic; mutation; amino acid; substitution; RNA splicing; protein synthesis; null phenotype; calcium-binding domain; ss. Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_type= INVERTED
/note= "inverted w.r.t. repeat at 1356-1472"
2232..2366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /rpt_type= INVERTED
/note= "Inverted w.r.t repeat at 1490-1614"
1490..1614
                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
1356..1472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /number= Intron_3
3126..3243
/*tag= i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Intron_2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Intron_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Exon_3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'number= Exon_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Exon_2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          064744 standard; DNA; 7653 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /number= Int
2450..2575
/*tag= e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3108..4302
/*tag= h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2367..2429
/*tag= d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2576..2853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2854..3107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          υ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "number"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        '*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ဖ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ntron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           intron
                                                                                                                                                             7321
                                                                                                                                                                                                                      7381
                                                                                                                                                                                                                                                                                                                                                                  7561
                                                                                                                                                                                                                                                                                                                                                                                              7561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   exon
                                                                            7261
                                                                                                                                                                                           7381
                                                                                                                                  7321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
                                                                                                                                                                                        QQ
                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                      δŏ
                                                                                                                                 g
                                                                                                                                                            ò
                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                    ò
```

```
processes of prevent cell death in organisms can develop agents to increase or prevent cell death in organisms can limit of 137pp; English.

The sequences given in 064735-45 represent mutations of the C. elegans ced-3 gene. A 2.8 kb mRNA was identified as the ced-3 transcript and adults, suggesting that ced-3 is expressed not only in cells undergoing cell death. The four largest introns as well as sequences 5' of the cell death. The four largest introns as well as sequences 5' of the cast codon contain repetitive elements, some of which have been characterised in non-coding regions of other C. elegans genes, such as fem-1, lin-12 and myob. The Ced-3 protein is 503 amino acids in cast fem-1, lin-12 and myob. The Ced-3 protein is 503 amino acids in length. Ced-3 is highly hydrophilic with no significant hydrophobic cregion that might be a transmembrane region. One region of Ced-3 is very rich in serine. It is thought that this region is involved in protein-protein interactions, which occur within the ced-3 gibt of face carrier mutations which occur within the ced-3 gibt of the mutations and such occur within the ced-3 and ced-4 gene two are putative splicing mutations. These mutations establish the concurs may be used to develop agents for treating conditions characterised by cell deaths, such as myocardial infarction, stroke, degenerative disease, traumatic brain injury, hypoxia, pathogenic confidention, aging or hair loss.

Sequence 7653 BP; 2430 A; 1453 C; 1271 G; 2499 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ttgtcgaattaatatccctattatcactttttcatgctcatcctcgagcggcacgtcctc 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 TIGICGAATTAATATCCCTATTATCACTTTTTCATGCTCATCCTCGAGCGGCACGTCCTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gttegaacattegtgtgtgtgtcetttteegttatettgeagteatetttgtegttt 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tttagcagaattaatcttgtttcagaaaaaagtccagttttctagattttccgtctta 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241 GITCGAACAIICGIGIGGIGCICCITIICCGITAICIIGCAGICAICIIIIGICGIII 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tttctttgttctttttgttgacgtgttgctaagcaattattacatcaattgaagaaa 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301 TITICITIGITCITITIGITGAACGIGITGCIAAGCAATTATTACATCAATTGAAGAAAA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99ctcgccgatttattgttgccagaaagattctgagattctcgaagtcgattttataata 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCTCGCCGATTTATTGTTGCCAGAAGATTCTGAGATTCTCGAAGTCGATTTTATAATA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tttaaccttggtttttgcattgtttcgtttaaaaaaaccactgtttatgtgaaaaacgat 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gotcatagattttcgatactcaaatccaaaaataaatttacgagggcaattaatgtgaaa 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tagtttactaataaaactacttttaaacctttacctttacctcaccgctccgtgttcatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 7126; DB 9; Length 7653;
Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches 17; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 93.1%;
Best Local Similarity 99.8%;
Matches 7636; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    601
         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
```

```
1140
                                                                                                                                                                                                                                                                                                    1200
                                                                                                                                                                                                                                                     cacctgtctccgtctcaattatcgtttagaaatgtgaactgtccagatgggtgactcata 1020
                                                                                                                                                                                                                                                                               1020
                                                                                                                                                                                                                                                                                                                                                                                                                                  1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1440
                                                   780
                                                                                                                                                                                                                                                                                                                                                                              TITITITITCCGCGAAATTIGCAATAAACCGGCCAAAAACTTICTCCCAAATTGTTAGGCAA 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           taaatcggctcgacattatcgtattaaggaatcacaaaattctgagaatgcgtactgcgc 1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          atgggtctgggcacggaaaagtttgatagacttttaaattctccttgcattttaattc 1740
gctacgacatattttgcgcgccaaatatgactgtaatacgcattctctgaattttgtgtt 1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tocgtaataatttcacaagattttggcattccactttaaaggcgcacaggatttattcca 1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1681 ATGGGTCTCGGCACGCAAAAAGTTTGATAGACTTTTAAATTCTCCCTTGCATTTTTAATTC 1740
                                                                            780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1501 TGATAACCCGTAAATCGTCACAACGCTACAGTAGTCATTTAAAGGATTACTGTAGTTCTA 1560
                                                                                                                                                                                                      960
                                                                                                                                                      900
                                                                                                                                                                               900
                                                 ctcatttggtatgctcttttcgattttatagctctttgtcgcaatttcaatgctttaaac
                                                                gtcgtccttggtatcctcaacttgtcccggtttttgttttcggtacactcttccgtgatgc
                                                                                                                                                                 781 aatccaaatcgcattatatttgtgcatggaggcaaatgacggggttggaatcttagatga
                                                                                                                                                     gatcaggagetttcaggggtaaacgeeeggttcattttgtaeeacatttcateatttteet
                                                                                                                                                                                                                                                                             CACCTGTCTCCGTCTCAATTATCGTTTAGAAATGTGAACTGTCCAGATGGGTGACTCATA
                                                                                                                                                                                                                                                                                                                                                                                                                    1321 TAAATCGGCTCGACATTATCGTATTAAGGAATCACAAAATTCTGAGAATGCGTACTGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1381 aacatatttgacggcaaaatatctcgtagcgaaaactacagtaattctttaaatgactac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tttttttccgcgaaatttgcaataaaccggccaaaaactttctccaaattgttacgcaa
                                                                                                                                                                                                                                                                                                                                                                                                        tatatacaatccataagaatatcttctcaatgtttatgatttcttcgcagcactttctct
                                                                                                                                                                                                                                                                                                                                                                                                                                                         togigitgotaacatcttatttttataatatttccgctaaaattccgatttttgagtatta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         atttatcgtaaaattatgataatagcaccgaaaactactaaaaaatggtaaaagctccttt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1381 AACATATTTGACGGCAAAATATCTCGTAGCGAAAACTACAGTAATTCTTTAAATGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tgataacccgtaaatcgtcacaacgctacagtagtcatttaaaggattactgtagttcta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1561 GCTACGAGATATTTTGCGCGCCAAATATGACTGTAATACGCATTCTCTGAATTTTGTGTT
                        199
                                                721
                                                                                                                                                                                                                                                                                                                                                      1081
                                                                                                                                                                                                                                                                                                                                                                              1081
                                                                                                                                                                                                                                                                                                                                                                                                       1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1201
661
                                                                        721
                                                                                                                          781
                                                                                                                                                    841
                                                                                                                                                                                                   901
                                                                                                                                                                                                                           901
                                                                                                                                                                                                                                                                           961
                                                                                                                                                                                                                                                                                                                                                                                                                                                       1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1261
                                                                                                                                                                                                                                                     961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1681
                       δ
                                            g
                                                                                               g
                                                                                                                                                g
                                                                        δý
                                                                                                                        ò
                                                                                                                                                                          δ
                                                                                                                                                                                                   αq
                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                Db
                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                            οy
                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Óγ
```

1741 aattactaaaattttcgtgaatttttctgttaaaatttttaaaatttttaaatcagttttctaatatt 1800

099

1800 1860 1920 1980 1980	2040 2040 2100 2100 2160 2160	2 2 2 2 8 4 4 5 6 6	2460 2460 2520 2520 2580	2640 2640 2700 2700 2760 2760 2820 2820	0
TTTTAAAATCAGTTTTCTAAATATT cattttaaaatcagttttcaaat CHITIANNINININININI CHITIACAAAATCAGTTTTCAAAT CGTTTGCGAAAAAAAAAAAA	racctttttttcgtagttcag 	TACGGGTCAGTAGAGGGTCAACC tgctagagagaacattatgatgt	ATCGAATAATAATTTTAAAAAA gaacggttcgcgagaagagegg [aaaaaagaggccgatcgtaattt!	.rgac.cgaa.rgc.g.cgaa.r.cga
	agggtcaaaattttccgattttactgactt 	JACCALO DE LA CONTROL DE LA CO	SATAATGGAGATATGATTAATGTGAGTTTTT ataatataaagaatatttttgcagtcatgtg	aaagttcggcgcaaaagcaaggttctcacgg 	acatotoottoaaatatooottuttooagigu
 ttccagg TTCCAGG TAAAAA, gattcai	tcaar IIII ICAAr Cagt IIII GCTG CLG	TTTCAC atcage 	ATAG aatt AATT agat ttcg	tttt gcaa TTGA attt 	acac
1741 1801 1861 1861 1961 1921	1981 1981 2041 2041 2101 2101	116. 2.2.2.2.2.2.2.2.3.4.3.4.3.4.3.4.3.4.3.4.	2341 2401 2401 2461 2461 2521	2581 2581 2641 2641 2701 2701 2761 2761	20
ος ος ος ος ος ος ος ος ος ος ος ος ος ο	00 00 00 00 00 00 00 00 00 00 00 00 00	oy oy	oy oy oy	90 00 00 00 00 00 00 00 00 00 00 00 00 0	qq

2880 2940 2940	3000	3060	3120	3180	3240	3300	3360	3420	3480	3540	3600	3660	3720 3720	3780 3780	3840	3900	3960
ACACACATCTCCTTCAAATATCCCTTTTTCCAGTGTTGACTCGAATGCTGTCGAATTCGA	ttcaccgacccgagttcaccgtgacagcgtctcttcagtgtcatcattcacttcttatca :	ggatatctactcaagagcaagatctcgttctcgatcgcgtgcacttcattca	acacaattattcatctcctccagtcaacgcatttcccagccaaccttgtatgttgatgcg 	actaaattctgagaatg 	aaatacagtaacctttaaatgactattgtagtgtc 	aaacgaatatatgctcgaattgtgacaacgaattttaatttgtcatttttgtgttttctt 	ttgatatttttgatcaattaataaattatttccgtaaacagacaccagcggtacagtact 	cttttaaagagttacagtagttttcgcttcaagatattttgaaaagaattttaaacattt 	tgaaaaaaatcatctaacatgtgccaaacgctttttcaagtttcgcagattttttga 	tttttttcattcaagatatgcttattaacacatataattatcattaatgtgaattcttg 	tagaaattttgggcttttcgttctagtatgctctacttttgaaattgctcaacgaaaaaa 	tcatgtggtttgttcatatgaatgaccaaaatagcaatttttatatattttcccctat 	tcatgttgtgcagaaaatagtaaaaagcgcatgcattttcgacatttttacatcga 	acgacagetcacttcacatgetgaagacgagagacgeggagaaataceacacatettet	gogtctctcgtcttcagcatgtgaaatgggatctcggtcgatgtaaaaaatgtcgaata 	atgtaaaaaatgcatgcgttttttacacttttctgcacaaatgaataggggaaaatgt 	. attaaaatacattttttgtatttttcaacatcacatgattaacccattatttttcgtt
2821 2881 2881	2941	3001	3061	3121	18	3241	3301	3361 3361	3421	3481	3541 3541	3601	3661	3721	3781	3841	3901
Qy Db Qy	ob Qy	Dp Qy	Db	qq ^o	o o	Db Qy	DP Qy	Db Qy	QQ V	do y	Dp Oy	DP Qy	Op Oy	Db Qy	Db Oy	Db Qy	DP OY

0 0	0 0	0 0			0 0	_																	
402	4080	4 4	5 6	26		32	4380	4440	20	4500	4560 4560	62	4680			. 08	4800	80	98	4920 4920	4980	40	04
1 gagcaacttaaaaagtagagatattagagcgaaaaccaaaatttcttcaagatattacc 	tttattgataattatagatgttaataagcatatcttgaatgaa	gcgaaacacctgaaaaatcaaaattctgcgaaattgaaaatagcattaaatac 	tttttgcatttttctacatcacatgaatgtagaaaattaaagggaaatcaaaatttc 	gaggatataattgaatgaaacattgcgaaattaaaatgtgcgaaacgtcaaaaagagg	GAGGATATAATTGAATGAAACATTGCGAAATTAAAATGTGGGAAAGGTCAAAAAAGGG aatttgggtatcaaaatcgatcctaaaaccaacacattcaqcatccgcaactctta		. tcaccggatgctcttctctcggatacagttcaagtcgtaatcgctcattcagcaaagctt	ctggaccaactcaatacatattccatgaagagatatgaactttgtcgatgcaccaacca	Laagccgtgttttcgacgagaaaccatgtacagaaacttctcgagtcctcgtggaatg	TAAGCCGTGTTTTCGACGAGAAACCATGTACAGAAACTTCTCGAGTCCTCGTGGAATG	gcctcatcataaataatgaacactttgagcagatgccaacacggaatggtaccaaggccg 	acaaggacaatcttaccaatttgttcagatgcatgggctatacggttatttgcaaggaca 	atttgatgggaagggtacggcgaattatattacccaaacgcgaaatttgccattttgc	ATC	CCGaaaatgtggcgcccggtctcgacacgacaatttgtgttaaatgcaaaatgtataat 	Halaaattttgaacttccgcgaaatgatttacctagtttcgaaatttt	TIGCAAAAAACAAAATTTIGAACTICCGCGAAAAIGATTIACCTAGITTICGAAATTIT	gtttttccggctacattatgtgtttttcttagtttttctataatatttgatgtaaaaa Gmmmmmccccmscamssmcmmmmmmmmmmmmmmmmmmmmm		ACCETTIGINAL	tttgaattttcaaaattatccaaaaatgcacaatttaaaatttgtgaaaattggcaaac 	gtgtttcaatatgaaatgtatttttaaaaactttaaaaaccactccqqaaaaaccaat	
3961 3961	4021	4081	4141	2 0	9	4261	4321	4381	44	44	4501	4561	62	4621	4681	4	4741	4801	ع ن	96	4921		4981
oy Oy	oy Oy	oy Oy	g &	q :	S 8	δλ	oy Oy	음 중 음	g .	ογ	9 A	g ò	qq	οy	oy Oy	ρρ	ΟŸ	g 2	7 E	δ δ	අ _ධ ද	q	ογ

6121 gtgaattgctgattggtcgcagttttcagtttagagggaatttaaaaatcgccttttcga 6180

qq

6180	6240 6240	6300	6360	6420	6480	6540 6540	9600	0999	6720 6720	6780 6780	6840 6840	6900	0969	7020	80	0.8	7140	7200	7260
	aaattaaaaattgattttttcaattttttcgaaaatattccgattattttatattcttt 	ggagcgaaagccccgtcctgtaaacattttaaatgataattaaatttttgcagcaa 	gtgtggagaaagaagccgagccaagctgacattctgattcgatacgcaacgacagctcaa 	tatgtttcgtggagaacagtgctcgtggatcatggttcattca	ttctcgacacacgcaaaggatattggatgttgttgagctgctgactga	gtcgcttgtggatttcagacatcacagggatcgaatattt 	cttgaaacaaacaatgcatgtctaacttttaaggacacagaaaataggcagaggctcct	ttgcaagcctgccgcgcgtcaacctagaattttagtttt 	gaatatttatgctaatttttttgcgttaaatttgaaa 	ccagtaaaaatctttattagccattggattttactgaa 	aacgaaatttatcgatttttaaatgtaaaaaaaatagcgaaattac 	atttaagccaaattgttaactcatttaaa 	cacggttggcgcggcagtttgcaaacgacgctcc 	1 gaaaacaagggatcggtttagattttccccaaaatttaaatta	GAAAACAAGGGATCGGITIAGATITITICCCCAAAATTIAAATTAAAATTAAAATTAAAAATTAAAAAATTAAAAAA		actogtgattcattgccaattgataattgtctgtatcttcccccagttctttcgt	ccaattagtttaaaaccatgtgtatattgttatcctatact 	1 atcatttctcttcccatttcacacatttccatttctcta
6121	6181 6181	6241	6301	36	4 2 4 2	48	6541	9 9	6661	2 2	78	8 8	90	96	702	02	708	14	
0y	Db Qy	Db Qy	g :	6 6	7 A A	7 A &	qa o	90 Å	do yç	do y	7 2 6	6 6	2 d d	연	ž ž	oy oy	g &	; a ò	. a

```
7501 tctcccgtgccggaatgcctcccggcctttaaagttcggaacatttggcaattatgtat 7560
                                                                                                                                                                                                          ccaagcccaacctaccgtaccatattcattttgcggggaatcaatttcgattaatt 7440
                                                                                                      7441 ttaacctatttttcgccacaaaaaatctaatatttgaattaacgaatagcattcccatc 7500
                                                                                                                                            7501 TCTCCCGTGCCGGAATGCCTCCCGGCCTTTTAAAGTTCGGAACATTTGGCAATTATGTAT 7560
                 7201 AICATITCICITCCCATITICACACATITCCCATITCTCTACGATAATCTAAAATTAIGAC 7260
                                                                                                                                                                                                                                                                                                                                        ced-3 (C6485T) gene.
C. elegans; ced-4; ced-3; mutant; transcriptional regulation; embryogenesis; cell death; hydrophilic; transmembrane; region; hydrophobic; mutation; amino acid; substitution; RNA splicing; protein synthesis; null phenotype; calcium-binding domain; ss. Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 3329-3396"
3329..3396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                /rpt_type= INVERTED
/note= "inverted w.r.t. repeat at 1356-1472"
                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_type= INVERTED
/note= "Inverted w.r.t repeat at 1490-1614"
1490..1614
                                                                                                                                                                                                                                                 Location/Qualifiers
1356..1472
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /number= Intron_2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /number= Intron_3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Intron_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /number= Exon_2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Exon_3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Exon_1
                                                                                                                                                                                                                                                                                                            064743 standard; DNA; 7653 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2576..2853
/*tag= f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3126..3243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note=""inv
2232..2366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2367..2429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3108..4302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2450..2575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2854..3107
                                                                                                                                                                                                                                                                                                                               23-JUN-1994 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag= c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag= g
/number= 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                        /*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /number=
                                                                                                                                                                                                                                                                                                                                                                                                          repeat_unit ·
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      exon
                                                                                                7381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FT
FT
FT
FT
FT
FT
FT
                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                         g
                                                                                                                                                                                                                g
                                                                                                                                                         ò
                                                                                                                                                                                              δŽ
                      qq
                                         ŏ
                                                          g
                                                                               ŏ
                                                                                                g
                                                                                                                   QΥ
```

```
601
                                                                                                                                                                                                         g
                                                                                                                                                                                                                                       엄
                                                                                                                                                                                                                        ŏ
                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                   <u>P</u>.
                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                               ŏ
                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Isolated C elegans cell death genes ced-3.and ced-4 - used to develop agents to increase or prevent cell death in organisms claim 14; Fig 4; 127pp; English.

The sequences given in Q64735-45 represent mutations of the C. elegans
        /rpt_type= INVERTED
/note= "inverted w.r.t. repeat at 3126-3243"
                                     'rpt_type= INVERTED
'note= "Inverted w.r.t. repeat at 3782-4070"
                                                                                                                                                                                                                                                                                                                                                                                                /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 6905-6965"
                                                                              "Inverted w.r.t. repeat 3487-3759"
                                                                                                                                                                                                                                                                                                                                                                                                                                       Inverted w.r.t. repeat 6567-6625"
                                                                                                                                                                                                                                                                                                                                           /*tag= w
/note= "C>T, from allele n2430"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (MASI ) MASSACHUSETTS INST TECHNOLOGY.
Horvitz HR, Shaham S, Yuan J;
WPI: 94-007542/01.
                                                                     'rpt_type= INVERTED
                                                                                                                                               /rpt_type= INVERTED
/note= "Repeat 3"
                                                                                                                                                                              'rpt_type= INVERTED
'note= "Repeat 3"
                                                                                                                                                                                                                                                                                                      'rpt_type= INVERTED
                                                                                                                                                                                                                                                                                                                                                                                                                              'rpt_type= INVERTED
                                                                                                                          Intron_4
                                                                                                                                                                                                                                   'number- Intron_5
                                                                                                                                                                                                                                                                                'number - Intron_6
                                                                                                                                                                                                                                                                                                                                                                          'number Intron_7
                                                                                                    Exon_4
                                                                                                                                                                                                                                                  /*tag= s
/number= Exon_6
                                                                                                                                                                                                             Exon_5
                                                                                                                                                                                                                                                                                                                              'number = Exon_7
                                                                                                                                                                                                                                                                                                                                                                                                                                                             /number = Exon_8
                      ..3759
                                                     .4070
                                                                                    .4634
                                                                                                          4635..5546
                                                                                                                                 1688..4719
                                                                                                                                                               ..5330
                                                                                                                                                                                                                   5761..5814
                                                                                                                                                                                             547..5760
                                                                                                                                                                                                                                           5815..5942
                                                                                                                                                                                                                                                                                       5062..6138
                                                                                                                                                                                                                                                                                                                                                          .7012
                                                                                                                                                                                                                                                                                                                                                                                                               ..6965
                                                                                             E
                                                                                                                                           0
                                                                                                                                                                                                                                                                 943..6297
                                                                                                                                                                                                                                                                                                                                                                                  6567..6625
                                                                                                                   ′*tag= n
                                                                                                                                                                                                                           /*tag= r
                                                                                                                                                                                                                                                                                                                                                                                                                                             7012..7075
                                                                                                                                                                                                                                                                                                                                                                    /*tag= x
                                                                                                    'number=
                                                                                                                          /number=
                                                                                                                                                                                                           'number-
                                                                                            *tag=
                                                                             /note=
                                                                                                                                                                        *tag=
                                                                                                                                                                                                                                                                          /*tag=
                                                                                                                                                                                                      *tad=
                                                                                                                                                                                                                                                                                                                                                                                           *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12-JUN-1992; US-897788.
20-NOV-1992; US-979638.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-DEC-1993.
14-JUN-1993; U05701.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P-PSDB; R53286.
                                                                                                                                                                                                                                                                                       repeat_region
                      repeat_unit
                                                     repeat_unit
                                                                                                                                repeat_unit
                                                                                                                                                               repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                  repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9325685-A.
                                                                                                                                                                                                                                                                                                                                                                                                                repeat_unit
                                                                                                                                                                                                                                                                                                                                   mutation
                                                                                                          intron
                                                                                                                                                                                                                  intron
                                                                                                                                                                                                                                                                intron
                                                                                                                                                                                                                                                                                                                                                           intron
                                                                                    exon
                                                                                                                                                                                             exon
                                                                                                                                                                                                                                          exon
                                                                                                                                                                                                                                                                                                              exon
```

```
ced-3 gene. A 2.8 kb mRNA was identified as the ced-3 transcript and was most abundant in embryos, but was also detected in larvae and young call teath. The four largest introns as well as sequences 5' of the start codon contain repetitive elements, some of which have been characterised in non-coding regions of other C. elegans genes, such as fem.1, lin-12 and myob. The Ced-3 protein is 503 amino acids in length. Ced-3 is highly hydrophilic with no significant hydrophobic region that might be a transmembrane region. One region of Ced-3 is protein interactions, similar to acid blobs in transcription forther might be a transmembrane region. One region of Ced-3 is protein interactions which occur within the ced-3 gene, eight of protein-protein interactions which occur within the ced-3 gene, eight of the mutations are missense mutations. These mutations and two are putative splicing mutations. These mutations establish the null phenotype of the ced-3 gene, confirming that ced-3, like ced-4, conducts may be used to develop agents for treating conditions characterised by cell deaths, such as myocardial infarction, stroke, infection, aging or hair loss.

Sequence 7653 BP; 2429 A; 1452 C; 1272 G; 2500 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 tttagcagaattaatcttgtttcagaaaaaagtccagttttctagattttccgtctta 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 ttgtcgaattaatatccctattatcactttttcatgctcatcctcgagcggcacgtcctc 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241 9ttcgaacattcgtggttgtgtccttttccgttatcttgcagtcatcttttgtcgttt 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301 ttttotttgttottttgttgaacgtgttgctaagcaattattacatcaattgaagaaaa 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241 GTICGAACATICGIGIGITGIGGCICCTITICCGTIAICTIGCAGICAICTITIGICGITT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361 ggctcgccgatttattgttgccagaaagattctgagattctcgaagtcgattttataata 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481 tagtttactaataaaactacttttaaacctttacctttacctcaccgctccgtgttcatg 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541 gctcatagattttcgatactcaaatccaaaataaatttacgaggcaattaatgtgaaa 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 agatotgaaataaggtgataaattaataaattaagtgtatttotgaggaaatttgactgt 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              caaaaacaatcctaagatttccacatgtttgacctctccggcaccttcttccttagcccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 7126; DB 9; Length 7653;
Pred. No. 0.00e+00;
0; Mismatches 17; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 99.8%;
Matches 7636; Conservative
      δλ
```

	0 0 0 0	00000	0000000	0 0 0 0 0 0 0 0
8 8 4 4 0 0	960 960 102(102(108(114 1120 120 120 126	132 132 138 138 144 144 150	156 156 162 168 168 174 174
tcatttggtatgctcttttcgattttatagctctttgtcgcaatttcaatgctttaaac 	gtcgtccttggtatcctcaacttgtcccggttttgtttt	ttttttttcgggaaatttgcaataaaccggccaaaaactttctccaaattgttacgcaa 	atttatogtaaaattatgataatagcaccgaaaactactaaaaatggtaaaagctccttt	tgataacccgtaaatcgtcacaacgctacagtagtcatttaaaggattactgtagttcta
21 21 81 41	901 901 961 961 1021	1081 1081 1141 1141 1201	1261 1261 1321 1321 1381 1381 1441	1501 1501 1561 1561 1621 1681 1681 1741
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0

aaaaatcagttttcaaat 186(ttttttcgtagttcagt 204(tecaataattteattat 2160	agaggaacattatgatgt 228 	ataatttta 	acgo HIII ACGO Ictot	cogatogtaatttt 2 	atttttaacacta 276 ATTTTTAACACTA 276 tgtcacacacaca 282	gotgtogaattoga 28
NACA NACA Strott	aggtcaaaa1 	gctgaattttg 	tcagccgaagatgat 	agtgataatggaga 	atcgtgaaagcagt 	ttttaaagtteggegeaaageaaggtetea 	tgaagtgaatatatttatttactgaaagcu 	cacacatctccttcaaatatccctttttccag
1801 1801 1861 1861 1921	1981 1981 2041 2041	10 10 16	2221 2221 2281 2281	34 34 40	2461 2461 2521 2521	8 8 4 4	70 70 76 76 76 76	88 88
0	oy Oy	oy oy	Db Oy Oy	da da da da da da da da da da da da da d	oy oy	90 A		6 6 G

2940 3000 3000 3060 3120 3120	3180 3180 3240 3240	36 36 42 42 42	3480 3480 3540 3540 3600	66 66 72 78 78	3840 3900 3900 3960 3960 4020
	aacactaaattetgagaatgogcattactcaacatatttgacgcgcaaatatetcgtag 		tgaaaaaaatcatctaacatgtgccaaacgctttttccaagtttcgcagattttttga	tcatgtggtttgttcatatgaatgaccaaaatagcaattttttatatattttt 	gcgtctccgtcttcagcatgtgaatgggatctcggtcgatgtaaaaaatgtcgaata
2881 2941 2941 3001 3061	3121 3121 3181 3181 3241		3421 3421 3481 3481 3541	66 66 66 66 66 66 66 66 66 66 66 66 66	3781 3781 3841 3901 3901
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	00 00 00 00 00 00 00 00 00 00 00 00 00	90 00 00 00 00 00 00 00 00 00 00 00 00 0	

δy	3961	. GAGCAACTTAAAAAGTAGAGAATATTAGAGCGAAAACCAAAATTTCTTCAAGATATTACC 4020
Op	4021	tttattgataattatagatgttaataagcatatcttgaatgaa
Qy	4021	TITATIGATAATTATAGATGITAATAAGGATATCTIGAATGAAAGTCAGCAAAAATRIGT 4080
a à	4081	gogaaacacctgaaaaaatcaaaaattctgcgaaaattgaaaatgcattaaaataca 41
ි සි	4	tttttgcattttctacatcacatgaatgtagaaaattaaaagggaaatgcaaattcta 420
Qy		
qq	4201	gaggatataattgaatgaaacattgcgaaattaaaatgtgcgaaacgtcaaaaagagga 4
δy	4201	GAGGATATAATTGAATGAAACATTGCGAAATTAAAATGTGCGAAACGTCAAAAAAGAGGA 4
qq	4261	tttgggtatcaaaatcgatcctaaaaccaacatttcagcatccgccactcttcat 432
δλ	4261	TIGGGTATCAAAATCGATCCTAAAACCAACACATTTCAGCATCCGCCAACTCTCAT 4:
qq	4321	tcaccggatgctcttctctggatacagttcaagtcgtaatcgctcattcagcaaagctt 43
Qy	4321	CCGGATGCTCTTCTCCGGATACAGTTCAAGTCGTAATCGCTCATTCAGCAAAGCTT 43
QQ	œ	otggaccaactcaatacatattccatgaagagatatgaactttgtcgatgcaccaacca
δλ	4381	IGGACCAACTCAATACATATTCCATGAAGAGGATATGAACTTTGTCGATGCACCAACCA
qq	4441	ttctcgagtcctcgtggaatg
δλ	4441	AAGCCGTGTTTTCGACGAGAAACCATGTACAGAAACTTCTCGAGTCCTCG
qq	4501	atgccaacacggaatggtaccaaggccg 456
ΟŊ	4501	CCICATCATAAATAATGAACACTITGAGCAGATGCCAACACGGAATGGTACCAAGGCCG 456
QO	4561	tatacggttatttgcaaggaca 462
QY	4561	CAAGGACAATCTTACCAATTTGTTCAGATGCATGGGCTATACGGTTATTTGCAAGGACA 462
Op	2	atctgacgggaagggtacggcgaaattatattacccaaacgcgaaatttgccattttgcg 4680
δλ	4621	TIGACGGGAAGGGTACGGCGAAATTATATTACCCAAACGCGAAATTTGCCATTTTGCG 468
Dp	4681	gcccggtctcgacacgacaatttgtgttaaatgcaaaaatgtataa
ØΣ	4681	CGAAAATGTGGCGCCCGGTCTCGACACGACAATTTGTGTTAAATGCAAAAATGTATAAT 474
qq	4741	gaaaatgatttacctagtttcgaaattttc 480
Οy	4741	ITGCAAAAAACAAAATTTTGAACTTCCGCGAAAATGATTTACCTAGTTTCGAAATTTTC 480
qq	4801	atgt
ΟY	4801	TITITICCGGCTACATTATGTGTTTTTTTTTTTTTTTTTT
qq	4861	caattttccgcatacaaaacttgatagcacgaaatcaatt 492
٥x	4861	CCGTTTGTAAATTTTCAGACAATTTTCCGCATACAAAACTTGATAGCACGAAATCAATT 49:
qq	4921	tccaaaaatgcacaatttaaaatttgtgaaaattggcaaa
δλ	4921	ICTGAATTTTCAAAATTATCCAAAAATGCACAATTTAAAATTTGTGAAAATTGGCAAAC 4
qq	4981	cactccggaaaagcaat
δÿ	4981	GTGTTTCAATATGAATGTATTTTTAAAAACTTTAAAAACCAC
qq	5041	atttgtttatttt
Οy	5041	ICAAAACAACGICACAATTCAAATTCAAAAGITATTCATCCATCGATTTGTTTATT

	0 0 0 0 0	20 20 20	8 8 8 0 4 4 0 4 0 4 0 4 0 4 0 0 4 0 4 0	000	20 20 80 80	400000000000000000000000000000000000000	8 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	<u>, v v 4 4</u>	546 546 552	558 558 564	57(57(576	582	297	606 601 611 611 618
Caaaatttgaaaaaatcatgaaggatttagaaaagttttataacattttttctagatttt CAAAATTTGAAAAAATTTTTTTTTTTTTTTTTTTTTTTT	accaaaatttgtcgtgtcgagaccaggtaccgtagttttgtcgcaaaattgcacca accaaaatttgtcgtgtcg	attcaaaaaaaggtcgaatttcgatttttttttggttttttggtcccaaaaccaaaa	aatgtaaactgatatttaatttccagggaatgctcctgacaattcgagactttgccaaac	ttattggagttgatgatataccgattagtacacacgagatatatgatcttctcaacgcgg 	gttcgttttttattttaattttaatataatattttaaataaa	gatgggacaatcgagacgggccattgttcaattttcttggatgtgtgcgccgcaagttc	attccagaaagtcccgatcgaaaaattgcgatataattacgaaattgtgataaaatgac
5101 5101 5161 5161 5161	3 4 8 3 3 4 3 4 4 4 4 4 4 4 4 4 4 4 4 4	5401 5401 5461 5461	5521 5521 5581 5581	5641 5641 5701 5701	5761 5761 5821 5821	5881 5881 5941 5941	6001 6001 6061 6061 6121 6121
	6 B 6 B 6	Oy Oy Oy	oy oy	40 40 40 60 60	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	96 65 65 65 65 65	Oy Oy Oy

6181	.aaattaaaaattgattttttcaattttttcgaaaaatattccgattattttatattcttt 6240
6241 6241	ggagcgaaagccccgtcctgtaaacattttaaatgataattaat
6301	gtgtggagaagaagccgagccaagctgacattctgattcgata
6361 6361	tatgtttcgtggagaaacagtgctcg
7	ttctcgacacacgcaaaggatatggatgttgttgagctgctgactga
0	TICICGACACACACAAAGGATAIGGAIGTIGITGAGCIGACIGACIGAAGGAAGAAGAAG 648
6481	gregicityggaaricagaaaacaaggaaaagaaaaaaaaaaaaaagaagagaaga
6541	cttgaaacaaacaatgcatgtctaacttttaaggacacagaaaataggcagaggctcct 66
. 0	tttgcagcttgcacctagaacttgcattttagctaaatgattgttt 666
6601	TITGCAAGCCTGCCGCGCGTCAACCTAGAATITTAGTTTTTAGCTAAAATGATTT
6661 6661	gaatattttatgctaatttttttgcgttaaattttgaatagtc
6721	ccagtaaaaatctttattagccattggattttactgaaaacgaaaatttgtagtttttc 67
8	aacgaaatttatcgatttttaaatgtaaaaaaaaatagcgaaattacatcaaccatcaa 684
6781	AACGAAATTATCGATTTTTAAATGTAAAAAAAAAAATGCGAAAATTACA
6841 6841	gcatttaagccaaaattgttaactcatttaaaaattaatt
6901	acacggttggcgcggcgagtttgcaaaacgacgctccgcctcttttctgtgcggctt 696
6901	ACACGGTTGGCGCGCGCGCAAGTTTGCAAAACGACGCTCCGCCTCTTTTTCTGTGCGGCT
96	gaaaacaagggatcggtttagatttttccccaaaatttaaattaaatttcggatgacatc 702
6961	GAAAACAAGGGATCGGTTTAGATTTTTCCCCAAAATTTAAATTAAATTTCAGATGACATC 702)
73	cogcctgctcaaaagttctacttttggccggaagcacgaaactctgccgtctaaaattc 708
7	CGCCTGCTCAAAAAGTTCTACTTTTGGCCGGAAGCACGAAACTCTGCCGTCTAAAATTC 708
7081	1 actegtgattcattgcccaattgataattgtctgtatcttctcccccagttctctttcgt 7140
4	ccaattaqtttaaaaccatqtqtatattqttatcctatactcatttcactttatcattct 720
4	
7201	toatttctcttcccattttcacacatttccatttctctaggataatctaagattatga
7201	
7261	l gtttgtgtctcgaacgcataataattttaataactcgttttgaatttgattagttgttgt 7320

```
isolated Celegans cell death genes ced-3 and ced-4 - used to develop agents to increase or prevent cell death in organisms Claim 14: Fig 4: 127pp; English.
The sequences given in 064735.45 represent mutations of the C. elegans ced-3 agene. A 2.8 kb mRNA was identified as the ced-3 transcript and was most abundant in embryos, but was also detected in larvae and young adults, suggesting that ced-3 is expressed not only in cells undergoing
                             /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 3782-4070"
3782..4070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 6905-6965"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat 6567-6625"
7012..7075
                                                                                                 /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat 3487-3759'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               w
"C>T, from allele n1949"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (MASI ) MASSACHUSETTS INST TECHNOLOGY.
Horvitz HR, Shaham S, Yuan J;
WPI; 94-007542/01.
                                                                                                                                                                                                                                                           /rpt_type= INVERTED
/note= "Repeat 3"
                                                                                                                                                                                                                                                                                                                        /rpt_type= INVERTED /note= "Repeat 3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_type= inverteD 6298..6537
                                                                                                                                                                                              n
r= Intron_4
                                                                                                                                                                                                                                                                                                                                                                                                                                      Intron_5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Intron_6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Intron_7
                                                                                                                                                                                                                                                                                                                                                                                         Exon_5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Exon_6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= aa
/number= Exon_8
                                                                                                                                                              Exon_4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'number= Exon_7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6062..6138
/*tag= u
                                                                                                                                                                                                                            4688..4719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /number= Ex
5943..6297
      3487..3759
                                                                                                                                 ..4634
                                                                                                                                                                               1635..5546
                                                                                                                                                                                                                                                                                                                                                                                                     5761..5814
                                                                                                                                                                                                                                                                                                                                                                                                                                                      5815..5942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ..7012
                                                                                                                                                                                                                                                                                         5221..5330
                                                                                                                                                                                                                                                                                                                                                        5547..5760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6567..6625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6905..6965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ×
                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ഗ
                                                                                                                                                                                                                                                                                                                                                                          /*tag= q
/number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag= x
/number=
                                                                                                                                                              /number=
                                                                                                                                                                                                                "number=
                                                                                                                                                                                                                                                                                                                                                                                                                                       'number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-897788.
US-979638.
                                                                                                                                                                                                                                                                                                                                       /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag=
                        /*tag=
                                                                                                                                                                                                 /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /*tag=
                                                                                                                                                                                                                                                /*tag=
                                                                                                                                                                                                                                                                                                             /*tag=
                                                                                    /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ′*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     005701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P-PSDB; R53283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23-DEC-1993.
14-JUN-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12-JUN-1992;
20-NOV-1992;
                                                                                                                                                                                                                                                                                           repeat_unit
      repeat_unit
                                                                   repeat_unit
                                                                                                                                                                                                                               repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9325685-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mutation
                                                                                                                                                                                 intron
                                                                                                                                                                                                                                                                                                                                                                                                          intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                          exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   exon
                                                                                                                                    exon
                                                                                                                                                                                                                                                                                                                                                           exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            exon
      7321 goccagtatatatgtatgtactatgcttctatcaacaaaatagtttcatagatcatcacc 7380
                                                                  7441 ttaacctatttttttcgccacaaaaatctaatatttgaattaacgaatagcattcccatc 7500
                                                                                                                                                                                                                                         7561 AAATTIGTAGGTCCCCCCCATCATTICCCGCCCATCATCTACATCTGCATTGTTTTTTCG 7620
ccaagcccaccaacctaccgtaccatattcattttgcggggaatcaatttcgattaatt 7440
                                                                                                                                                7440
                                                                                                                                                                                                           7441 TTAACCTATITITICGCCACAAAAATCTAATATITGAATTAACGAATAGCATICCCAIC 7500
                                                                                                                             aaatttgtaggtcccccccatcatttcccgcccatcatctcaaattgcattcttttcg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C. elegans; ced 4; ced-3; mutant; transcriptional regulation; embryogenesis; cell death; hydrophilic; transmembrane; region; hydrophobic; mutation; amino acid; substitution; RNA splicing; protein synthesis; null phenotype; calcium-binding domain; ss. Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           inverted w.r.t. repeat at 1356-1472"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 3329-3396"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /rpt_type= INVERTED
/note= "inverted w.r.t. repeat at 3126-3243"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /rpt_type= INVERTED
/note= "Inverted w.r.t repeat at 1490-1614"
1490..1614
                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
1356..1472
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_type= INVERTED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Intron_3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'number Intron_2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Intron_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Exon_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Exon_2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Exon_3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q64740 standard; DNA; 7653 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2576..2853
/*tag= f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'note= "in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2450..2575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= e
/number= E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note= "Inv
3329..3396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2367..2429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2854..3107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3108..4302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3126..3243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ced-3 (C6322T) gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23-JUN-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   intron
                                                                                                             7381
                                                                                                                                                                                                                                                                                                      7561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DAC

NEW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KWW

KWW KW

KWW KW

KWW KW

KWW KW

KWW KW

KWW KW

KWW KW

KWW KW

KWW KW

KWW KW

KWW KW

KWW KW

KWW KW

KWW KW

KWW KW

KWW KW

KWW KW

KWW KW

KWW KW

KWW KW

KWW KW

KWW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW KW

KW
                                                g
                                                                                                                                                                            셤
                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                         음
                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                      엄
                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                               à
                                                                                                                                            ò
```

```
start codon contain repetitive elements, some of which have been characterised in non-coding regions of other C. elegans genes, such as fem.1, lin-12 and myob. The Ced-3 protein is 503 amino acids in length. Ced-3 is highly hydrophilic with no significant hydrophobic region that might be a transmembrane region. One region of Ced-3 is very rich in serine. It is thought this region is involved in protein-protein interactions, similar to acid blobs in transcription factors. Of the mutations which occur within the ced-3 gene, eight of the mutations are missense mutations, two are nonsense mutations and two are putative splicing mutations, two are nonsense mutations and two are putative splicing mutations. These mutations establish the null phenotype of the ced-3 gene, confirming that ced-3 like ced-4, cunction is not essential for viabillity. The ced-3 and ced-4 gene products may be used to develop agents for treating conditions characterised by cell deaths, such as myocardial infarction, stroke, degenerative disease, tranmatic brain injury, hypoxia, pathogenic infection, aging or hair loss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ctcatttggtatgctcttttcgattttatagctctttgtcgcaatttcaatgctttaaac 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gttcgaacattcgtgttgtgtgctccttttccgttatcttgcagtcatctttgtcgttt 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ggetegeegatttattgttgeegaaagattetgagattetegaagtegattttataata 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCTCGCCGATTTATTGTTGCCAGAAAGATTCTGAGATTCTCGAAGTCGATTTTATAATA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tttagcagaattaatcttgtttcagaaaaagtccagttttctagattttccgtctta 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTAGCACAATTAATCTTGTTTCAGAAAAAAGTCCAGTTTTCTAGATTTTTCCGTCTTA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 ttgtcgaattaatatccctattatcactttttcatgctcatcctcgagcggcacgtcctc 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                              agatctgaaataaggtgataaattaataaattaagtgtatttctgaggaaatttgactgt 60
                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ttttctttgttctttttgttgaacgtgttgctaagcaattattacatcaattgaagaaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tttaaccttggtttttgcattgtttcgtttaaaaaaaccactgtttatgtgaaaaacgat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTTAACCTTGGTTTTTGCATTGTTTCGTTTAAAAAAACCACTGTTTATGTGAAAAACGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541 gotcatagattttcgatactcaaatccaaaaataaatttacgagggcaattaatgtgaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    caaaaacaatcctaagatttccacatgtttgacctctccggcaccttcttccttagcccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                661 accactccatcacctctttggcggtgttcttcgaaacccacttaggaaagcagtgtgtat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTTCGAACATTCGTGTGTTGTGCTCCTTTTCCGTTATCTTGCAGTCATCTTTGTCGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tagtttactaataaaactacttttaaacctttacctttacctcaccgctccgtgttcatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCACTCCATCACCTCTTTGGCGGTGTTCTTCGAAACCCACTTAGGAAAGCAGTGTGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 AGATCTGAAATAAGGTGATAAATTAAATTAAGTGTATTTCTGAGGAAATTTGACTGT
                                                                                                                                                                                                                                                                                                                                                                                                                       .;
0
                                                                                                                                                                                                                                                                                                                                                                                  DB 9; Length 7653;
                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches 17; Indels
                                                                                                                                                                                                                                                                                                                                                                                  similarity 99.8%; Score 7126; DB 9; Similarity 99.8%; Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                         7636; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                   Best_Local
Matches 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
          888888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Óγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

1020 ttgctgctgctacaatccactttctttctcatcggcagtcttacgagcccatcataaac 1080 atgggtctggggcacggaaaaagtttgatagacttttaaattctccttgcatttttaattc 1740 aattactaaaaattttcgtgaatttttctgttaaaattttttaaaatttttctaatatt 1800 ttccaggctgacaaacagaaacaaaaacacaacaacaacattttaaaaatcagttttcaaat 1860 1021 TTGCTGCTGCTACAATCCACTTTCTTTTCTCATCGGCAGTCTTACGAGCCCATCATAAAC 1080 1141 TATATACAATCCATAAGAATATCTTCTCAATGTTTATGATTTCTTCGCAGCACTTTCTCT 1200 atttatogtaaaattatgataatagcaccgaaaactactaaaaaatggtaaaagcteettt 1320 taaatcggctcgacattatcgtattaaggaatcacaaaattctgagaatgcgtactgcgc 1380 TGATAACCCGTAAAATCGTCACAACGCTACAGTAGTCATTTAAAGGATTACTGTAGTTCTA 1560 GCTACGAGATATTTTGCGCCCCAAATATGACTGTAATACGCATTCTCTGAATTTTGTGTT 1620 721 CTCATTTGGTATGCTCTTTTCGATTTTATAGCTCTTTGTCGCAATTTCAATGCTTTAAAC 780 aacatatttgacggcaaaatatctcgtagcgaaaactacagtaattctttaaatgactac AACATATTTGACGGCAAAATATCTCGTAGCGAAAACTACAGTAATTCTTTAAATGACTAC tgataacccgtaaatcgtcacaacgctacagtagtcatttaaaggattactgtagttcta gctacgacatattttgcgcgccaaatatgactgtaatacgcattctctgaattttgtgtt gatcaggagctttcagggtaaacgcccggttcattttgtaccacatttcatcattttcct gtogtccttggtatcctcaacttgtcccggttttgttttcggtacactcttccgtgatgc cacctgtctccgtctcaattatcgtttagaaatgtgaactgtccagatgggtgactcata TTTTTTTTCCGCGAAATTTGCAATAAACCGGCCAAAAACTTTCTCCCAAATTGTTACGCAA tatatacaatccataagaatatcttctcaatgtttatgatttcttcgcagcactttctct tcgtgtgctaacatcttatttttataatatttccgctaaaattccgatttttgagtatta tecgtaataattteacaaqatttttggcatteeactttaaaggegeacaggatttatteea 1741 AATTACTAAAATTTTCGTGAATTTTTCTGTTAAAATTTTTAAAATCAGTTTTCTAATATT GICGICCIIGGIAICCICAACIIGICCCGGIIIIIGIIIICGGIACACICIICCGIGAIGC ttttttttccgcgaaatttgcaataaaccggccaaaaactttctccaaattgttacgcaa TAAATCGGCTCGACATTATCGTATTAAGGAATCACAAAATTCTGAGAATGCGTACTGCGC 901 1021 1081 1141 1261 1321 1321 1381 1381 1441 1441 1501 1501 1561 1561 1681 1681 1741 1801 1801 841 901 196 1201 1261 1621 g g g g g g g a ŏ ò ά ò ò g δy g 63 q δ g δy g ŏ g ŏ g ò g QΫ g à 엄 δ Óγ δy

δy

20 20 80		40	000	09	0 0	0 0	40	0 0	0 00	0 0	0 0	0 0	0 0	0 0	0 0	9 9	0 0
199	13	20,	21	21	222	228	234	240	246	252 252	258 258	264	270	276 276	282	288	294 294
aaaaataacgatttctcattgaaaattgtgttttatgtttgccaaaataaagagaac 		ttcaagagggtcaaaattttccgattttactgactttcacctttttttt	gcagttgttggagtttttgacgaaaactaggaaaaatcgataaaaattactcaaatcg 	. agctgaattttgaggacaatgtttaaaaaaaacactatttttccaataatttcactcat 	tttcagactaaatcgaaaatcaaatcgtactctgactacggctcagtagagaggtcaacc 	. atcagccgaagatgatgcgtcaagatagaaggagcttgctagagaggaacattatgatgt 	tctctagtcatctaaaagtcgatgaaattctcgaagttctcatcgcaaaacaagtgttga 	. ataytgataatggagatatgattaatgtgagtttttaatcgaataatatttaaaaaa 	aattgataatataaagaatattttgcagtcatgtggaacggttcgcgagaagggagacggg 	. agatcgtgaaagcagtgcaacgacggggaqatgtggcgttccacgcgttttatgatgctc 	. ttcgctctacgggacacgaaggacttgctgaagttcttgaagctctcgcagatcgtagg 	. tttttaaagttcggcgcaaaagcaagggtctcacggaaaaaagaggccgatcgtaattt 	. gcaacccaccggcacggtttttcctccgaaaatcggaaattatgcactttcccaaatat 	. ttgaagtgaaatatatttatttactgaaagctcgagtgattatttat	attttcgtggcgcaaaggccattttgtagatttgccgaaatacttgtcacacaca	acacacatctccttcaaatatccctttttccagtgttgactcgaatgctgtcgaattcga 	gtgtccaatgtcaccggcaagccatcgtcggagccgcgcattgagcccgccggctacac
1861 1861 1921	1921	1981	2041	2101	2161	2221	2281	2341 2341	2401	2461	2521 2521	2581 2581	2641	2701 2701	2761 2761	2821 2821	2881
oy Oy	ζ	g &	do oy	Oy Oy	Dp Qy	Oy Oy	dy oy	oy o	Oy Oy	Oy Oy	Db Qy	Oy Oy	dy Oy	Db Qy	Db Qy	Oy	g & .

30 30 30 30 30 31 31 31 31	41 ttcaccgacccgaftcaccgtgacagcgtctttcagtgtcatcattcattcatt
Db 318 Qy 318 Db 324 Qy 324 Db 330	81 gaaaaatacagtaaccctttaaatgactattgtagtgtcgatttacgggctcgattttcg 32 [1] [1] [1] [1] [1] [1] [1] [1] [1] [1]
Oy 336 Db 336 Oy 336 Oy 342 Oy 342	01 TTGALATTTT 1 CLTLTLAAAGA 1 CTTTTAAAGA 21 LGAAAAAAAA
Oy 348 Oy 354 Oy 354 Oy 350 Oy 360	1 ttttttcattcaagatatgcttattaacacatataattatcattaatgtgaatttcttg 354
2y 366 2y 366 0b 372 2y 372 0b 378	1 tcatgttgtgcagaaaatagtaaaaagcgcatgcatttttcgacattttttacatcga 3720
OD 384 OY 380 OY 390 OY 396 OD 396 OD 396	

										0 0	0 0	0 0	0 0	0
08 14 14 20 20	4260 4260 4320 4320	4380 4440	50	4560 4560	4620 4620	4680 4680	4740	4800 4800	4 860 4 860	4920 4920	498(498(504(5100	516(
	gaggatataattgaatgaaacattgcgaaattaaaaatgtgcgaaacgtcaaaaaagagga [acagt ACAGT atgaa	aagccgtgttttcgacgagaaaaccatgtacagaaacttctcgagtcctcgtggaatg 	gcctcatcataaataatgaacactttgagcagatgccaacacggaatggtaccaaggccg 	acaaggacaatcttaccaattgttcagatgcatgggctatacggttatttgcaaggaca 	atctgacgggaaggtacggcgaattatattacccaaacgcgaatttgccattttgcg 	ccgaaaatgtggcgcccggtctcgacacgacaatttgtgttaaatgcaaaatgtataat 	tttgcaaaaaacaaaattttgaacttccgcgaaaatgatttacctagtttcgaaattttc 	gtttttccggctacattatgtgtttttcttagtttttctataatatttgatgtaaaaa 	accgtttgtaaattttcagacaattttccgcatacaaaacttgatagcacgaaatcaatt 	ttotgaattttoaaaattatcoaaaatgoacaatttaaaattgtgaaaattggoaaac 	ggtgtttcaatatgaaatgtatttttaaaaactttaaaaaccactccggaaagcaataa 	aaatcaaaacaacgtcacaattcaaattcaaaagttattcatccgatttgtttattttg 	caaaatttgaaaaaatcatgaaggatttagaaaagttttataacatttttctagattt
0 0 0 1 1	4201 4201 4261 4261	32.	4441	4501	4561	4621	4681	4741	4801	4861	4921	4981	5041	5101
6	90 65 05 05 05	Oy Oy Db	da da	Oy Oy	oy Oy	Oy Oy	Oy Oy	Oy Oy	Oy Oy	da Q	Db Qy	Db Qy	d y	QQ

101 101 101 101 101 101 101 101 101 101

		0 0 0 0 0	0 0 0 0 0	00000	
63 63 64 64	648 648 654 654	660 666 666 672 672	678(678(684(690(6960 6960 7020 7020 7080	7140 7140 7200 7260 7260 7320 7320
99agcgaaagccccgtcctgtaaacatttttaaatgataattaat	ttctcgacacagcaaaggatatggatgttgttgagctgctgaagtcaataagaa 	ttgaaacaatgcatgttaacttttaaggacacagaaaataggcagaggctcct T111111111111111111111111111111111	ccagtaaaaatctttattagccattggattttactgaaacgaaaatttgtagtttttc 	acacggttggcgcggcaagtttgcaaaacgacgctccgcctcttttctgtgcgggctt [actograticatigcccaatigataatigtctgtatcticccccagitcttiticgt [
6241 6241 6301 6301 6361	2 2 8 8	6541 6541 6601 6661 6661	6721 6721 6781 6781 6841	7 7 9 9 0 0	7081 7081 7141 7201 7201 7261 7261
6 B 6 B 6 B	oy oy	oy oy	90 O O O O O O O O O O O O O O O O O O O	9	

```
7440
                                                   7440
                                                                 7561 aaatttgtaggtccccccatcatttcccgcccatctccaaattgcattcttttcg 7620
                                                                                                                                          7501 tctcccgtgccggaatgcctcccggccttttaaagttcggaacatttggcaattatgtat
                                                                                                                                                                                                                                               C. elegans; ced-3, ced-3; mutant; transcriptional regulation; embryogenesis; cell death; hydrophilic; transmembrane; region; hydrophobic; mutation; amino acid; substitution; RNA splicing; protein synthesis; null phenotype; calcium-binding domain; ss. Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                          /rpt_type= INVERTED
/note= "inverted w.r.t. repeat at 1356-1472"
2232..236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /rpt_type= INVERTED
/note= "inverted w.r.t. repeat at 3126-3243"
3487..3759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 3329-3396"
3329..3396
                                                                                                                                                                                                                                                                                                                  /rpt_type= INVERTED
/note= "Inverted w.r.t repeat at 1490-1614"
1490..1614
                                                                                                                                                                Location/Qualifiers
1356..1472
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /rpt_type= INVERTED
                                                                                                                                                                                                                                                                                                                                                                                        2367..2429
/*tag= d
/number= Intron_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Intron_2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Intron_3
                                                                                                                                                                                                                                                                                                                                                                                                                                  Exon_2
                                                                                                                                                                                                                                                                                                                                                                                 /number= Exon_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Exon_3
                                                                                                                                                                                                           Q64737 standard; DNA; 7653 BP. Q64737;
                                                                                                                                                                                                                                                                                                                                                                                                                                        2576..2853
/*tag= f
/number= In
                                                                                                                                                                                                                                23-JUN-1994 (first entry) ced-3 (G5757A) gene.
                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= e
/number= Ex
                                                                                                                                                                                                                                                                                                                                                                                                               2450..2575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3126..3243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2854..3107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= g
/number= E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3108..4302
                                                                                                                                                                                                                                                                                                                                                                           U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag= h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         *tag=
                                                                                                                                                                                                                                                                                                  repeat_unit
                                                                                                                                                                                                                                                                                                                                 repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                         intron
                                                                                                                                                                                                                                                                                                                                                                                                                                        intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         intron
                                                                                                                                                                                                                                                                                                                                                                   exon
                                                                                                                                                                                                                                                                                                                                                                                                                  exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 exon
                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                 g
                 δ
                              g
                                                                a
                                                                                               g
                                                                                                                                 g
                                                                                                                                                               q
                                                δy
                                                                                 Qγ
                                                                                                                ò
                                                                                                                                                 ŏ
                                                                                                                                                                                ò
```

ö

```
as fem-1, lin-12 and myob. The Ced-3 protein is 503 amino acids in length. Ced-3 is highly hydrophilic with no significant hydrophobic region that might be a treansmembrane region. One region of Ced-3 is very rich in serine. It is thought that this region is involved in creation protein interactions, similar to acid blobs in transcription factors. Of the mutations which occur within the ced-3 gene, eight of the mutations are missense mutations. These mutations and two are putative splicing mutations. These mutations satablish the null phenotype of the ced-3 gene, confirming that ced-3 ilke ced-4, coull phenotype of the ced-3 gene, confirming that ced-3 and ced-4, gene function is not essential for viabillity. The ced-3 and ced-4 gene frontext may be used to develop agents for treating conditions characterised by cell deaths, such as myocardial infarction, stroke, degenerative disease, tranmatic brain injury, hypoxia, pathogenic infection, aging or hair loss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                781 aatccaaatcgcattatatttgtgcatggaggcaaatgacggggttggaatcttagatga 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      661 ACCACTCCATCACCTCTTTGGCGGTGTTCTTCGAAACCCCACTTAGGAAAGCAGTGTGTAT 720
                                                                                                                                                                                                                                                                                                                                                                                                                                gotcatagattttcgatactcaaatccaaaaataaatttacgagggcaattaatgtgaaa 600
                                                                                                                                                                                                                                                                                                                                                                             61 tttagcagaattaatcttgtttcagaaaaagtccagttttctagatttttcgtctta 120
                                                                                                                                                                                                                                                                                                                                                  61 ITTAGCACAATTAATCTTGTTTCAGAAAAAAGTCCAGTTTTCTAGATTTTTCCGTCTTA 120
                                                                                                                                                                                                                                                                    0; Mismatches 17; Indels 0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361 ggotcgccgatttattgttgccagaagattctgagattctcgaagtcgattttataata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541 GCTCATAGATTTTCGATACTCAAATCCAAAAATAAAATTTACGAGGCAATTAATGTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661 accactccatcacctctttggcggtgttcttcgaaacccacttaggaaagcagtgtgtat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421 TITAACCITGGITITITGCATIGITITCGTITAAAAAAACCACTGTITATGTGAAAAACGAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601 caaaaacaatcctaagatttccacatgtttgacctctccggcaccttcttccttagcccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 7126; DB 9; Length 7653;
Pred. No. 0.00e+00;
                                                                                                                                                                                                                   Query Match 93.1%;
Best Local Similarity 99.8%;
Matches 7636; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    අ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŏ
                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
           δ
                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Isolated Celegans cell death genes ced-3 and ced-4 - used to develop agents to increase or prevent cell death in organisms Claim 14; Fig 4; 127pp; English.
The sequences given in Q64735-45 represent mutations of the C. elegans ced-3 gene. A 2.8 kb mRNA was identified as the ced-3 transcript and was most abundant in embryos, but was also detected in larvae and young adults, suggesting that ced-3 is expressed not only in cells undergoing cell death. The four largest introns as well as sequences 5' of the start codon contain repetitive elements, some of which have been characterised in non-coding regions of other C. elegans genes, such
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 6905-6965"
            'note= "Inverted w.r.t. repeat at 3782-4070"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat 6567-6625"
                                                    /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat 3487-3759"
                                                                                                                                                                                                                                                                                                                      /*tag= r
/note= "G>A, from allele n2433"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (MASI ) MASSACHUSETTS INST TECHNOLOGY.
HOTVILZ HR, Shaham S, Yuan J;
WPI: 94-007542/01.
P-PSDB: R53281.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_type= INVERTED
                                                                                                                                                                                  'rpt_type= INVERTED
'note= "Repeat 3"
                                                                                                                                                                                                                                       /rpt_type= INVERTED
/note= "Repeat 3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                        number= Intron_6
                                                                                                                                                                                                                                                                                                                                                                           number= Intron_5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'number= Intron_7
                                                                                                                                              'number= Intron_4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /number= Exon_7
5538..7012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /number= Exon_8
                                                                                                                                                                                                                                                                                                                                                                                                                 'number= Exon_6
                                                                                                                                                                                                                                                                                             'number= Exon_5
                                                                                                       'number= Exon_4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rpt____/note= "11.
\^n5..6965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6062..6138
/*tag= v
                                                                                                                                                          4688..4719
/*tag= o
                                                                                                                                                                                                                                                                                                                                              5761..5814
/*tag= s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ..7075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6567..6625
                                                                                                                                                                                                   'note= "Rep
.221..5330
                                                                                                                                                                                                                                                                5547..5760
                                                                                                                                                                                                                                                                                                                                                                                      815..5942
                                                                                                                                                                                                                                                                                                                                                                                                                             5943..6297
                                                                                                                4635..5546
                         3782..4070
                                                                              1303..4634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag= x
                                                                                                                                                                                                                                                                                                                                                                                                                                              Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag= w
                                                                                           /*tag= m
                                                                                                                                                                                                                             *tag= p
                                                                                                                                 /*tag= n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-DEC-1993.
14-JUN-1993; U05701.
12-JUN-1992; US-897788.
20-NOV-1992; US-979638.
                                                                                                                                                                                                                                                                                                                                                                                                                                             *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *tag=
                                                                                                                                                                                                                                                                                                                                                                                                      *tag=
                                                                                                                                                                                                                                                                                 *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9325685-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_unit
                                                                                                                                                                                                               repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_unit
                           repeat_unit
                                                                                                                                                             repeat_unit
                                                                                                                                                                                                                                                                                                          mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    intron
                                                                                                                                                                                                                                                                                                                                                  intron
                                                                                                                                                                                                                                                                                                                                                                                                                                  intron
                                                                                                                      intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              exon
                                                                                                                                                                                                                                                                                                                                                                                           exon
                                                                                  exon
                                                                                                                                                                                                                                                                      exon
```

540

999

۵	0 0	0 0	20		0	0 0		0	0 (0 0	0	0	0	0	0 0	0 (0	0	_	0	0	0	0 0		
A 84	1 900 1 900	96	10	10	108	114	12	120		v	132		138	4	144	150	156	2	162		168(174(174(Ö	80	1860 1860	Ö	
	gatcaggagctttcagggtaaacgcccggttcattttgtaccacatttcatcattttcc 	gtogtccttggtatcctcaacttgtcccggttttgttttcggtacactcttccgtgatg 	cacctgtctccgtctcaattatcgtttagaaatgtgaactgtccagatggggtgactc 	ccactttcttttctcatcggcagtcttacgagcccatcata	TIGCIGCIGCTACAAICCACTIICTTITCTCAICGGCAGICTTACGAGCCCAICATAAA	<pre>ttttttccgcgaaatttgcaataaaccggccaaaaactttctccaaattgttacgcaa </pre>	tatatacaatccataagaatatcttctcaatgtttatgatttcttcgcagcactttctc	ATATACAATCCAT	togtgtgctaacatcttattttataatatttccgctaaaattccgatttttgagtatta 	ttatratassattatratssatssatscoordinates		caaaattctgagaatgcgtactgcg	<u>aaatcgcctcgacattatcgtattaaggaatcacaaaattctgagaatgcgtactgcg</u>	aacatatttgacggcaaaatatctcgtagcgaaaactacagtaattctttaaatgactac 	LAIAITITGACGGCAAAATAICTCGTAGCGAAAACTACAGTAATICITITAAATGACTA	<pre>tgtagcgcttgtgtcgatttacgggctcaatttttgaaaataatttttttt</pre>	tgataacccgtaaatcgtcacaacgctacagtagtcatttaaaggattactgtagttcta 	Ctacqacatattttqcocqccaaratqactqtaaracatattcacatattt		cgcacaggatttattcc	CCGTAATAATTTCACAAGATTTTGGCATTCCACTTAAAG	ggaaaaagtttgatagacttttaaattctccttgcatttttaatt	TGGGTCTCGGCACGCAAA	aaaatcagttt 	ITACTAAAATTTTCGTGAATTTTTCTGTTAAAATTTTTAAAATCAGTTTTCTAATAT	-tccaggcggaaacagaacaaaacacaacaacaacattttaaaattccaaat 	gccaaaataa 	
781	841	901	961 961	02	05	1081	1141	1141	1201	1261	26	32	32		9	1441	1501	1561	io.	621	621	681	681	74		80.0	861	
χ̈́	g y	g &	a y	۾	۰. ۱۸	8 8	a	δ	a &	a a	>-	م					,			1		-					1	
3	1 0	<u> </u>	a o	Δ (o i	0	Ω	0	a S	Δ	ò	<u> </u>	Ò.	8 B	S S	a õ	d V	QQ	ò	Ор	ò	Q	ò	g :	3 2	g &	g ,	

1921 gattcaaaacaatttiacaaaaaaacccaaaatt 0y 1921 GATTCAAAACAATTTAACAAAAAAAACCCAAAATT 1981 ttcaagagggtcaaaatttccgatttactgactttc 1981 ttcaagagggtcaaaatttccgatttactgactttc 1981 ttcaagagggtcaaaatttccgatttactgactttc 1981 ttcaagagggtcaaaatttccgatttactgactac 0y 2041 GCAGTTGTTGGGGTTTTGACGAAAAAAAAA 2041 GCAGTTGTTGGGGAATTTTGACGAAAAAAAAAAAAAA 2101 AGCTGAATTTTGGGCACATGTTAAAAAAAAAAAAAAAAA		
1981 ttcaagagggtcaaaattttcgattttactgacttt 1981 TTCAAGAGGGTCAAAATTTCCGATTTTACTGACTTT 2041 gcagttgttggaggtttttgacgaaactaggaaaaa 2041 Gcagttgttggaggtttttgacgaaactaggaaaaa 2041 Gcagttgttggaggtttttgacgaaactaggaaaaa 2041 acgttgttgaggacaatgatttaaaaaaaaaaacact 2101 AGCTGAATTTGAGGACAATGTTAAAAAAAAACACT 2101 AGCTGAATTTTGAGGACAATGTTAAAAAAAAACACT 2101 AGCTGAATTTTGAGGAAACTGACTTTACTGACT 2101 AGCTGAATTTTGAGGAAACTGACTTTACTGACTT 2101 AGCTGAATTTTGAGGAAACTGACTTTTACTGAAATTTTACTGAAATTTTACTGAAATTTGCACTGACTTTTACTGAAATTTTACTGAAATTTGCACTCACGGACTGCACTGACTTTTTACTTAC	caaaaaaaaccccaaaattcgccagaaatcaagat 	aaaaa 1980
1981 TITCHINININININININININININININININININININ	ttccgattttactgactttcacctttttttttcgtag	204
2041 gcagttgtttgaggtttttgacgaaaactaggaaaaaa 204		04
2101 agctgaattttgaggacaatgtttaaaaaaaaaaacact	gacgaaaactag 	tcg 2100
2101 AGCTGAATTTGAGGACAATGTTAAAAAAAAAACACT 2161 tttcagactaaatgaaaatcaatcgtactctgact 2161 TTCAGCTAAATCGAAAATCAATGTACTGACTGACT 222 atcagccgaagatgatggtcaagatagaagaggtt 222 atcagccgaagatgatggtcaagatagaagaggtt 223 ttctagtcatctaaaagtcgatcaagatagaagagctt 1	tgtttaaaaaaaaacactattttccaataatttcac	20 216
2161 tttcagactaaatcgaaatcaaatcgtactctgact		16
2161 TTTCACACTAAATCGAAAATCAAATCGTACTTGACT 2221 atcagccgaagatgatgatcagatagaagagatt 2221 ATCACCCGAAGATGACGACAAATCGTACTTGACT 2281 tctctagtcatctaaaagtcgatgaaattctcgaagt 2281 tctctagtcatctaaaagtcgatgaaattctcgaagt 2281 tctctagtcatctaaaagtcgatgaaattctcgaagt 2381 atcagccaaatgagagatatgattaatgtgagttttta 2381 atagtgataatgagagatatgattaatgtgagttttta 2381 atagtgataatgagagatatgattatgaggttttta 2381 atagtgataatgagagatatgattatgaggttttta 2381 atagtgataatataaagaatattttgcagtctttgaggttcti 2381 atagtgataatataaagaatattttgcagtctttggcg 2461 agatcgtgaaagcagtgcaacgacggggagatgtggc 2461 agatcgtgaaagcagtgcaacgacgggagattcti 2521 trcgctctacgggacacagagacttgcggggagattcti 2521 trcgctctacgggacacagagacttgcggggagattcti 2581 tttttaaagttcgggcaaaagcaaggactcacggag 2681 tttttaaagttcgggcaaaagcaaggactcacggag 2681 tttttaaagttcgggcaaaagcaagggtctcacggag 2681 tttttaaagttcggcacagtttttcctccgaaaatcgga 2761 ttgaagtgaaatattttatttattactgaaaatcgga 2761 ttgaagtgaaatattttattattactgaaaatcgga 2761 ttgaagtgaaatattttattattactgaaaatcggg 2761 ttgaagtgaaatattttattattactgaagtttgccg 2761 attttcgtgggcgcaaaaagccattttgtagatttgccg 2761 attttcgtgggcgcaaaaatcccttttccagtttgccg 2761 attttcgtgggcgcaaaatacccttttccagtttgccg 2761 attttcgtgggcgcaaaaatcccttttccagtttgccg 2761 attttcgtgggcgcaaaatacccttttccagtttgccg 2761 attttcgtgggcgcaaaaatcccttttccagtttgccg 2761 attttcgtgggcgcaaaaatccccttttccagtttgccg 2761 attttcgtgggcgcaaaaatccccttttccagtttgccg 2761 attttcgtgggcgcaaaaatccccttttccagtttgccg 2761 attttcgtgggcgcaaaaatccccttttccagtttgccg 2761 attttcgtgggcgcaaaaatccccttttccagtgttg 2761 attttcgtggcgcaaaaatcccctttccagaacccgggttgccccagaccccgagttcgagccccagacccccccaaacccccccaaaccccccaaacccccc		cc 22
221 atcagccgaagtgatgcgtcaagtatgaaggagtt 221 ATCAGCCGAAGATGATGCGTCAAGATAGAAGGAGCTT 222 ATCAGCCGAAGATGATGCGTCAAGATAGAAGGAGCTT 228 tctctagtcatctaaagtcgatgaagtctcagagt 228 tctctagtcatctaaagtcgatgatgatgatttta 234 atagtgataatgagagtatgattatgaggatttta 240 aattgataatgaagagtatgattatgaggagtctaggg 240 aattgataatataaagaatatttttgcagtcatgtgg 241 ATAGATAATAAAGATGATTAATGTCAGTTTTA 240 aattgataatataaagaatatttttgcagtcatgtgg 241 ATAGATAATAAAGAAGAATATTTTGCAGTTATGGG 241 AATGATAATATAAAGAATTTTTGCAGTTATGGGG 242 AATGATAAATATAAAGAATTTTTGCAGTTCTGGG 252 tttttaaagttcggcaaaagcaaggacttctt 253 tttttaaagttcggcaaaagcaaggacttctgggg 254 GGACCCGCGCAAGGACTTGCTGAAGTTCTC 258 tttttaaagttcggcgcaaaagcaaggtctcacgga 264 gcaacccacggcacggttttttcctccgaaaatcgg 264 gcaacccaccggcacggttttttcctccgaaaatcggg 264 gcaacccaccggcacggttttttcctccgaaaatcggg 264 gcaacccaccgcacaggttttttttttttttttctgaggtttg 270 ttgaagtgaaatatattttttttttttctgaaatttgccg 271 attttcgtgggcaaaaggccattttgtagatttgccg 271 illililililililililililililililililili		1111 AACC 2220
221 ATCACCGAAGATGATGACCGTCAAGAAGAGAGAGCTTTTA 2281 tctctagtcatctaaaagtcgatgaaattctcgaagt 2281 tcTcTAGTCATCTAAAAGTCGATGAAATTCTCGAAGT 2381 atagtgataatggagatatgattaatgtgagttttta 1111111111	gtcaagatagaaggagcttgctagagaggaacattatg	p-
2281 tctctagtcatctaaaagtcgatgaaattctcgaagt 2281 TCTTTAGTCATCTAAAGTCGATGAAATTCTCGAAGT 2381 ATAGTGATAATGGACATATCATTTTTGCAGTTTTTTA 2381 ATAGTGATAATGGACATATCATTATTGCAGTTTTTTA 2381 ATAGTGATAATGACATATCATTATTGCAGTTTTTA 2401 aattgataatataaagaatatttttgcagtcagtgga 2401 aattgataatataaagaatatttttgcagtcagtggg 2401 AATTGATAATAAAGAATATTTTGCAGTCATGTGG 2401 aattgataatataaagaacaggacaggagagtggg 2401 AATTGATAATATAAAGAATATTTTGCAGTCATGTGG 2401 agatcgtgaaagcagtgcaacagacggggagatgtggg 2401 AGTCGTGAAAGCAGCACACACGCGGAGATTGCC 2521 ttcgctctacgggacacagaagacttgtll	GTCAAGATAGAAGGAGCTT	11) TGT 2280
2341 TCTCTAGTCATCTAAAGTCGATGAAATTCTCGAAGT 2341 atagtgataatggagatatgattaatgtgagttttta 1	tcgatgaaattctcgaagt	ga 234
2341 atagtgataatggagatatgattaatgtgagttttta	TCGATGAAATTCTCGAAGTTCTCATCGCAAAACAAGTG	3A 234
2401 aattgataataaagaatattttgcagtcatgtggggatgtgatgatgatggggatggaagagagatgtgggggaagagagagagagggggg	tgattaatgtgagttttt 	24
2401 attrogramataaagaattittigoagacagtogatgag 2401 AATTGATAATATAAAGAATATTTTGCAGTCAGTGGG 2461 agatcgtgaaagaagtgcaacgacggggagatgtggc 2461 dGATCGTGAAAGCAGTGCAACGGGGAGATGTGGG 2521 ttcgctctacgggacacgaaggacttgctgaagtctt 1	IGALIAATGIGAGITTTTAATCGAATAATATTTT	240
2461 agatcgtgaaagcatgcaacgacgggagatgtgc 2461 AGATCGTGAAAGCAGTGCAACGAGGGGAGAATGTGGCC 2521 ttcgctctcagggacacgaaggacttgctgaagttcti 1	tattttgcagtcatgtg 	4
2461 AGATCGTGAAAGCAGTGCAACGACGGGGAGATGTGGCC 2521 ttcgctctacgggacacgaaggacttgctgaagttctt 2521 ttcgctctacgggacacgaaggacttgctgaagttctt 2521 TTGGTCTACGGGACACGACGACGACGAGTTCTT 2581 tttttaaagttcggcgcaaaggacttgctgaagttctt 2581 TTTTAAAGTTCGGCGAAAAGCAAGGGTCTACCGGAA 2641 GCAACCCACCGGCACGATTTTTCCTCCGAAATCGG 2701 ttgaagtgaatatattttatttactgaaagctcggt 2701 ttgaagtgaatatattttattattactgaaagctcggt 2701 TTGAAGTGAAATATTTTATTACTGAAAATCGGA 2701 TTGAAGTGAAATATTTTTTTCTAGATTTGCG 2701 TTGAAGTGAAATATTTTTTTTTTTTTTTTTTTTTTTTT	29 C 20 C C C C C C C C C C C C C C C C C	2 4 6
2521 ttcgctctacgggacacgaaggacttgctgaagttcti 2521 TTCGCTCTACGGGACACGAAGGACTTGCTGAAGTTCTT 2581 tttttaaagttcggggcaaaagcaagggtctcacggaa 2581 tTTTAAAGTTCGGCGCAAAAGCAAGGGTCTACGGAA 2581 TTTTAAAGTTCGGCGCAAAAGCAAGGGTCTCACGGAA 2641 GCAACCCACGGCACGGTTTTTTCCTCCGGAAATCGGAA 2701 ttgaagtgaaatatattttattactcagaaagtcgagt 2701 TTGAAGTGAAATATTTTATTACTGAAAGCTCGAGI 2701 TTGAAGTGAAATATTTTATTACTGAAAGCTCGAGI 2701 TTGAAGTGAAATATTTTTTTTACTGAAAGCTCGAGI 2701 TTGAAGTGAAATATTTTTTTTACTGAAAGCTCGAGI 2701 TTGAAGTCAAATATTTTTTTTTTTTTTTTTTTTTTTTTT	GACGGGAGATGTGC	111 111 CTC 2520
1521 TTGGTTTININININININININININININININININI	aaggacttgctgaagttcttgaagctctcgccagatcg	gg 258
1581 tttttaaagttcggcgaaagcaagggtctcacggaa 		28
1581 TTTTAAAGTTCGGCGCAAAGGCTCTCACGGAAGGGTCTTTAAAGTTCGGCGCGCAAAGGCTCTCCGGGAAAGGCTCTCCGGGAAAGGCTCTCCGGAAATGGGTGGG	gcaagggtctcacggaaaaaagaggccgatcgtaa	tt 264
19 19 19 19 19 19 19 19	SCAAGGGTCTCACGG	
641 GCAACCCACGGCACGGTTTTTTTTTTTTTTTTTTTTTTT	ttttcctcgaaaatcggaaattatgcactttcc	at 270
701 ttgaagtgaaatattttatttactgaaagtcgagg 		 TAT 2700
701 Tigadisaanianinininininininininininininininin	tatttactgaaagctcgagtgattatttatttttaa	لىد
761 atttcgtggcgcaaaaggccattttgtagatttgccg 		LII CTA 2760
761 ATTTCGTGGGCAAAGGCCATTTGTAGATTTGTCGGGGGGGG	ccattttgtagatttgccgaaaatacttgtcacacac	ac 2820
821 acacacatctccttcaaatatcccttttccagtgttga 	CCATTTGTAGATTTGCC	II AC 2820
	tocotttttccagtgttgactcgaatgctgtcgaat	a 288
881 gtgtccaatgtcaccggcaagccatcgtcggagccgcgc 	rcctttttccagigtrg	II GA 2880
881 GTGTCCAATGTCACCGCAAGCCATCGTCGGACCCGCCCGC	gccatcgtcggagccgccattgagccccgccggcta	
941 ttcaccgacccgagttcaccgtgacagcgtcttcagt 	SCCATCGTCGGAGCCGCGCATT	AC 2940
941 TTCACCGACTCACCGTGACAGCGTCTCTTCAGT	cgtgacagcgtctcttcag	3000 sa
	CGTGACAGCGTCTCTTCAGTGTCATCATTCACTTCTTA	CA 3000

agagcaagatctcgttctcgatcgcgtgcacttcattcat	coctttaaatgactattgtagtgtcgattt 	tcaattaataaattatttccgtaaacagacaccagcggtacagtact 3360	tctaacatgtgccaaaacgctttttcaagtttcgcagatttttga 3480	cttttcgttc 	aaaatagtaaa 	ttcagcatgtgaaatgggatctcggtcgatgtaaaaaatgtcgaata 3840	ttgtatttttcaacatcacat
Jagcaagat 	aaaatacagtaacctttaaa 	caattaati caattaat 	taacatg TAACATG atatgct 	ttttcgtt TTTCGTT catatgaa	catgttgtgcagaaaatagt 	tcagcatgt TCAGCATGT 	ttaaaatacatttttgtatt
3001 3001 3061 3061 3121	7 7 7 7	3301 3361 3361	3421 3421 3481 3481	3541 3541 3601 3601	66 72 72	3781 3781 3841 3841	
	7 9 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8 & 8 & 8	8 8 8 8	8 8 8 8	6 6 6 6	8 6 8	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6

4 4 (200	260	1320	1380	440	500	9 9	62	89	74	. 0 0	86	4920		04		161	5220
gogaaacactgaaaaaatcaaaattctgogaaaattgaaaaatgcattaaatac 	1 tttttgcatttttctacatcacatgaatgtagaaaattaaaagggaaatcaaatttcta 4 	gaggatataattgaatgaaacattgcgaaattaaaatgtgcgaaacgtcaaaaagagga 4 			ctggaccaactcaatacatattccatgaagagatatgaactttgtcgatgcaccaacca	1 taagccgtgttttcgacgagaaaaccatgtacagaaacttctcgagtcctcggaatgt /	1 Indeceds of interconductions and interconductions of the control	1 SCCICALCARAMAN SALMAN CITAGOS CANON CONTROLL SALMAN CANON	11 actgacgggaagggtacggcgaaattatattacccaaacgcgaaatttgccattttgcg 	11 Allicatedoratedoratedorosana infarincecentreconfirming 1990 militaria de la cogaaaaugtgogeceggtetegacacgacaatttgtgttaaatgcaaaaagtataaat lilililililililililililililililililili	81 CCGAAAAIGICGCCCCCGGICTCGACAACAATIIGIGIIAAAIGCAAAAAGAAAATAAAAAAAAAA	41 TTIGCAAAAAACAAAATIIIGAACIIICGCGAAAAIGSIIIACCIASIIIGGGGGGGGGG	61 accottgtaaattttcagacaattttccgcatacaaaacttgatagcacgaaatcaatt 	21 ttctgaattttcaaaattattcaaaatgcacaatttaaaatttgtgaaaattggcaaac	11 TTCTGAATTTTCAAAATTATCCAAAAATGCACAATTTAAAATTTGTGAAAATTGGCAAAAC81 TTCTGAAAATTTTGGCAAAAC81 TTCTGAAAATTGGCAAAAAC81 GGCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	41 aaatcaaaacaacgtcacaattcaaattcaaagttattcatccgatttgtttattttg	41 AAAICAAAAACAAAGAAAGAAAGAAAGAAAGAAAGAAAGA	
408	414	420	426	432	438	444	450	4 4 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	462	468	474	4 4 6	98 4	4 40	4 4 2	200	51	51
Oy Oy	Db Qy	oy Oy	g &	2 8 8	2 A S	· 요	S B 5	S 6 5	2 6 5	S S	р д В оў	A 6	2 8 6	g 9	ON ON	S 8	S S	QY

0	0 0	0 0	0 0	0 0	0 0	0 0												
 522	g 528(534	540(546(5520	5580	64	5700	76	80 80	88 8	5940 5940	6000	و و	12	18(6240 6240	30
	acagcttcgagagtttgaaattacagtactccttaaaggcgcacaccccatttgcattg; 	accaaaatttgtcgtgtcgagaccaggtaccgtagttttgtcgcaaaattgcaccat 	tggacaataaaccttcctaatcaccaaaagtaaaattgaaatctcgaaaagccaaaaa 	cgattttttttgg 	ccaaaaagaaacccgaaaaaa 	tgatatttaatttccagggaatgctcctgacaattcgagactttgccaa 	acggagattctgcgatactcgtgattctatcacacggagaagagaatg 	ataccgattagtacacacgagata 	ggcgaataagccgaaaatcgtttttgtgcaggcttgtcgaag 	ttaaataaattcattttc 	sgagttectgeatttet 	atgtgtgo ATGTGTGO	aatatteetteaaaaat 	ttgtgataaaatg 	ogtogatetecgeecaetteatoggattggtttgaaagtgggegg 	ttcagtttagagggaatttaaa 	ttgattttttcaattttttcgaaaatattccgattatttta 	cctgtaaacatttttaaatgataattaataaatttttgcago
5161	5221	5281 5281	5341	5401	5461	5521 5521	5581	5641 5641	5701 5701	5761 5761	5821 5821	5881 5881	5941 5941	6001	6061 6061	6121 6121	6181 6181	6241
67	Dp Qy	qa Vo	g &	oy B	oy oy	oy oy	oy oy	رد _۷	g ,3	do oy	oy Oy	g &	oy ob	do yo	Db Qy	g ç	Db Qy	do '

δy	6241	GGAGCGAAAGCCCCGTCCTGTAAACATTTTAAATGATAATTAAATTTTTTGCAGCAA	6300
QC	6301	lgtggagaaagaagccgagccaagctgacattctgattcgatacgcaacgacagctca	6360
δ	6301	GIGIGGAGAAAGAAGCGAGCCAAGCTGACATCTGATTCGATACGCAACGACAGCTCAA	6360
qq d	36	tatgittcgitggagaaacagtgctcgitggatcatggttcattcaagccgtctgtgaagtg	42
Š í	9	atgittcgtggagaaacagtgctcgtggatcatggttcattcaagccgtctgtgaagt	6420
Oy Oy	6421	ttctcgacacacgcaaaggatatggatgttgttgagctgctgactga	6480
qq	6481	togottgtggatttcagacatcacagggatcgaatattttgaaacagatgccagaggt	4
δλ	6481	GTCGCTTGTGGATTTCAGACATCACAGGATCGAATATTTTGAAACAGATGCCAGAGGTA	4
Dp	6541	ttgaaacaaacaatgcatgtctaacttttaaggacacagaaaataggcagaggctc	0099
δy	6541	CTTGAAACAAAGCATGCATGTCTAACTTTTAAGGACACAGAAAAAATAGGCAGAGGCTCCT	0099
Op	6601	tttgcaagcctgccgcgcgtcaacctagaattttagtttttagctaaaatgatttt	0999
δy	6601	IGCAAGCCIGCCGCGCGTCAACCIAGAAITITAGTITITAGCTAAAAIGAITIT	0999
q d	99	gaatattttatgctaattttttgcgttaaattttgaatagtcactatttatcgggttt	7
Š	9	AATATTTTATGCTAATTTTTTGCGTTAAATTTTGAAATAGTCACTATTTATCGGGTTT	6720
a ò	6721	CCagtaaaaaatctttattagccattggattttactgaaaacgaaaatttgtagtttttc	6780
d d	~	77777711101111111111111111111111111111	
λŏ	78		6840 6840
g	6841	catitaagccaaaatigitaacicatitaaaaattaaticaaagtigiccacgagtati (9
ΟŸ	6841		
QQ	6901	9gttggcgcgcgcgcaagtttgcaaaacgacgctccgcctttttttt	0969
οy	6901	CACGGTIGGCGCGCGCCAAGTITGCAAAACGACGCTCCGCCTCTITITTCTGTGCGGCTT	0969
qq	6961	cccaaaatttaaattaaatttcagatgacat	7020
QY	6961	AAAACAAGGGATCGGTTTAGATTTT	7020
qq	7021	gcctgctcaaaaagttctacttttggccggaagcacgaaactctgccgtctaaaatt	080
δy	7021	GCCTGCTCAAAAAGTTCTACTTTTGGCCGGAAGCACGAAACTCTGCCGTCTAAAATTC	7080
QQ	7081	taattgtctgtatcttctccccagttctctttgt '	7140
ΟŊ	7081	CTGTGATTCATTGCCCAATTGATAATTGTCTGTATCTTCTCCCCCAGTTCTTTGT	14
qq	7141	tgtatattgttatcctatactcatttcactttatcattc	20
οy	7141	CAATTAGTTTAAAACCATGTGTATATTGTTATCCTATACTCATT	20
QQ	7201	tottoccattttcacatttccatttcttacgataatctaaaattatga	7260
δy	7201	TCATTTCTC	26
g	7261	tcgttttgaatttgattagttgttg	320
δy	7261 (TTTGTGTCTCGAACGCATAATAATTTTAATAACTCGTT	320
qq	ī	atcatc	380
δy	7321 (CCCAGTATATATGTATGTACTATGTTCTATCAACAAAATAGTTTCATAGATCATCAC	380

Page 49

```
THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE S
         7381 ccaagcccaacctaccgtaccatattcattttgcggggaatcaatttcgattaatt 7440
                                                                                                                                  ttaacctattttttcgccacaaaaatctaatttgaattaacgaatagcattcccatc
                                                                                                                                                                                                                                                                                                                                                                                                             C. elegans; ced-4; ced-3; mutant; transcriptional regulation; embryogenesis; cell death; hydrophilic; transmembrane; region; hydrophobic; mutation; amino acid; substitution; RNA splicing; protein synthesis; null phenotype; calcium-binding domain; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_type= INVERTED
/note= Inverted w.r.t. repeat at 3782-4070"
3782.4070
/*tag= 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_type= INVERIED
/note= "inverted w.r.t. repeat at 1356-1472"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 3329-3396"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat at 3126-3243"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_type= INVERTED
/note= "Inverted w.r.t repeat at 1490-1614"
1490..1614
/*tag= b
                                                                                                                                                                                                                                                         /rpt_type= INVERTED
/note= "inverted w.r.t.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
1356..1472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /number= Exon_2
2576..2853
/*tag= f
/number= Intron_2
2854..3107
/*tag= g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      __ag= g
/number= Exon_3
3108..4302
/*tag= h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /number= Intron_1
2450..2575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'number= Intron_3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Exon_1
                                                                                                                                                                                                                                                                                                                                    77 10
0664745; standard; DNA; 7653 BP.
064745;
23-JUN-1994__(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3126..3243
/*tag= 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2367..2429
/*tag= d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ..2366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ..3396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3487..3759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag= c
/number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *tag=
                                                                                                                                                                                                                                                                                                                                                                                                 ced-3 (C7020T) gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       intron
                                                                       7441
                                                                                                                                                                                             7561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 exon
                                                                                                                                                                                                                                                       g
                                                                                                    ò
                                                                                                                               g
                                                                                                                                                                                             g
                                                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                     g
                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                       ò
```

```
Forblated Celegans cell death genes ced-3 and ced-4 - used to develop agents to increase or prevent cell death in organisms claim 14; Fig 4; 127pp; English.

The sequences given in Q64735-45 represent mutations of the C. elegans ced-3 gene. A 2.8 kb mRNA was identified as the ced-3 transcript and was most abundant in embryos, but was also detected in larvae and young adults, suggesting that ced-3 is expressed not only in cells undergoing cell death. The four largest introns as well as sequences 5' of the start codon contain repetitive elements, some of which have been characterised in non-coding regions of other C. elegans genes, such as fem-1, lin-12 and myoD. The Ced-3 protein is 503 amino acids in length. Ced-3 is highly hydrophilic with no significant hydrophobic region that might be a transmembrane region. One region of Ced-3 is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_type= INVERTED
/note= "Inverted W.r.t. repeat at 6905-6965"
6905..6965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat 6567-6625"
7012..7075
rpt_type= INVERTED
/note= "Inverted w.r.t. repeat 3487-3759"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag= w
/note= "C>T, from allele n1163"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-DEC-1993.
14-JUN-1993. U05701.
12-JUN-1992: US-897788.
20-NOV-1992: US-979638.
(MASI ) MASSACHUSETTS INST TECHNOLOGY.
HORVILZ HR, Shaham S, Yuan J;
PPSDB: R53288.
                                                                                                                                                                                                  /rpt_type= INVERTED
/note= "Repeat 3"
5221..5330
                                                                                                                                                                                                                                                                                 /rpt_type= INVERTED
/note= "Repeat 3"
5547..5760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_type= INVERTED 6298..6537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5943..6297
/*tag= t
/number= Intron_6
6062..6138
                                                                                                                                                                                                                                                                                                                                                                                                                                 /number= Intron_5
5815..5942
                                                                                                                                             Intron_4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Intron_7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= s
/number= Exon_6
                                                               '*tag= m
'number= Exon_4
                                                                                                                                                                                                                                                                                                                                                                          Exon_5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag= v
/number= Exon_7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'number= Exon_8
                                                                                                   4635..5546
                                                                                                                                                                                                                                                                                                                                                                                           5761..5814
                                      ..4634
                                                                                                                                                              4688..4719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6538..7012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6567..6625
                                                                                                                          /*tag= n
                                                                                                                                                                                      *tag= 0
                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag= r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /*tag= w
                                                                                                                                                                                                                                                                      *tag= p
                                                                                                                                                                                                                                                                                                                                                       '*tag= q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *tag= u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *tag= x
                                                                                                                                             "number=
                                                                                                                                                                                                                                                                                                                                                                     "number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W09325685-A
                                                                                                                                                                repeat_unit
                                                                                                                                                                                                                                               repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mutation
                                                                                                       intron
                                                                                                                                                                                                                                                                                                                                                                                           intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       intron
                                                                                                                                                                                                                                                                                                                                 exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                          exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 exon
                                            exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            exon
```

ö 540 protein-protein interactions, similar to acid blobs in transcription factors. Of the mutations which occur within the ced-3 gene, eight of the mutations are missense mutations, two are nonsense mutations and two are putative splicing mutations. These mutations and two are putative splicing mutations. These mutations and two are putative splicing mutations. These mutations and function is not essential for viability. The ced-3 and ced-4 gene products may be used to develop agents for treating conditions characterised by cell deaths, such as myocardial infarction, stroke, degenerative disease, traumatic brain injury, hypoxia, pathogenic sequence 7653 BP; 2429 A; 1452 C; 1272 G; 2500 T; 900 99 9 aatccaaatcgcattatatttgtgcatggaggcaaatgacgggggttggaatcttagatga 840 tttagcagaattaatcttgtttcagaaaaaagtccagttttctagattttccgtctta 120 tttaaccttggtttttgcattgtttcgtttaaaaaaaccactgtttatgtgaaaaacgat 480 TITAACCITGGITITIGCATIGITICGITITAAAAAAACCACIGITIAIGIGAAAAACGAI 480 ACCACTCCATCACCTCTTTGGCGGTGTTCTTCGAAACCCACTTAGGAAAGCAGTGTGTAT 720 ctcatttggtatgctcttttcgattttatagctctttgtcgcaatttcaatgctttaaac 780 9 1 agatctgaaataaggtgataaaattaataaattaagtgtatttctgaggaaatttgactgt 60 Gaps Caaaaacaatcctaagatttccacatgtttgacctctccggcaccttcttccttagccc accactccatcacctctttggcggtgttcttcgaaacccacttaggaaagcagtgtgtat 241 GTTCGAACATTCGTGTGTTGTGCTCCTTTTCCGTTATCTTGCAGTCATCTTTGTCGTTT 301 TITICITIGITCITITIGITGAACGIGITGCIAAGCAATTATTACATTGAAGAAAA gctcatagattttcgatactcaaatccaaaataaatttacgagggcaattaatgtgaaa CAAAAACAATCCTAAGATTTCCACATGTTTGACCTCTCCGGCACCTTCTTCCTTAGCCCC tagititaciaalaaaactactitiaaaccititaccitiaccicaccgciccgtgiicatg tttctttgttctttttgttgaacgtgttgctaagcaattattacatcaattgaagaaaa .; 0 Score 7126; DB 9; Length 7653; Pred. No. 0.00e+00; 0; Mismatches 17; Indels Query Match 93.1%; Best Local Similarity 99.8%; Matches 7636; Conservative 61 421 661 61 241 301 361 361 421 481 481 541 541 601 601 721 781 781 g 8888888888888888 ò g Q g g g õ g g g g g ď g QQ ò ò ò ò ð ò ò ò ò 2 ò

1200 1380 1680 1680 atttatcgtaaaattatgataatagcaccgaaaactactaaaaaatggtaaaagctccttt 1320 1861 TAAAAATAACGATTTCTCATTGAAAATTGTGTTTTATGTTTTGCGAAAATAAAAGAGAACT 1920 gattcaaaacaattttaacaaaaaaaaccccaaaattcgccagaaatcaagataaaaaa 1980 ttgctgctgctgctacaatccactttctttctcatcggcagtcttacgagcccatcataaac taaatcggctcgacattatcgtattaaggaatcacaaaattctgagaatgcgtactgcgc aacatatttgacggcaaatatctcgtagcgaaaactacagtaattctttaaatgactac aattactaaaattttcgtgaatttttctgttaaattttttaaaatcagttttctaatatt ttocaggctgacaaacagaaacaaaaacacaacattttaaaattttcaaat gatcaggagctttcagggtaaacgcccggttcattttgtaccacatttcatcattttcct TIGCIGCIGCIACAAICCACITICITITCICAICGGCAGICITACGAGCCCAICAIAAAC TTTTTTTTTCCGCGAAATTTGCAATAAACCGGCCAAAAACTTTCTCCAAAATTGTTACGCAA tatatacaatccataagaatatcttctcaatgtttatgatttcttcgcagcactttctct tcgtgtgctaacatcttattttataatatttccgctaaaattccgatttttgagtatta AACATATTTGACGGCAAAATATCTCGTAGCGAAAACTACAGTAATTCTTTAAATGACTAC tecgtaataattteacaagattttggcattecactttaaaggegeacaggatttatteea atgggtctgggcacggaaaaagtttgatagacttttaaattctccttgcatttttaattc TTCCAGGCTGACAAACAGAAACACAACAACAACATTTTAAAAATCAGTTTTCAAAT taaaaataacgatttctcattgaaaattgtgttttatgtttgccaaaataaaagagaact ttttttttccgcgaaatttgcaataaaccggccaaaactttctccaaattgttacgcaa tgataacccgtaaatcgtcacaacgctacagtagtcatttaaaggattactgtagttcta AATTACTAAAATTTTCGTGAATTTTTCTGTTAAAATTTTTAAAATCAGTTTTCTAATATT 1081 1141 1321 1381 1621 1681 1741 1801 1921 901 961 1141 1201 1201 1261 1381 1441 1501 1801 1861 901 961 1021 1021 1081 1261 δy g Ω 유 Ω g οy pp ΟŻ Dp ŏ g ΩŸ g δý g QY g ŏ g οy g οy g οy Op QΥ Q 67 g QΥ g ò g δλ g

921	GATTCAAAACAATTTTAACAAAAAAAACCCCAAAATTCGCCAGAAATCAAGATAAAAA 1980 ttcaagaggtcaaaattttccgattttactgactttcatttttttcgtagttcagt 2040
- E - D -	AAGAGGGTCAAAATTTTCCGATTTTACTGACTTTCACCTTTTTTTT
. ₁	CAGTIGITGGAĞITITIGACGAAAACIAĞGAAAAATCGAIAAAATTACICAAATCĞ 210
Ď — Ā	gctgaattttgaggacaatgtttaaaaaaaaacactattttccaataatttcactcat 2160
サード	ttcagactaaatcgaaatcgtactctgactacggtcagtagagaggtcaacc 2220
	atcagccgaagatgatgcgtcaagatagaaggttgctagagaggaacattatgatgt 2280
	gtogatgaaattottogaagttotoatogoaaaoaagtgttga 234
10 - 14	atagtgataatggagatatgattaatgtgagtttttaatcgaataataattttaaaaaaa 2400
10 - 74	aattgataatataaagaatattttgcagtcatgtggaacggttcgcgagaagagacggg 2460
10 - 2	agatogtgaaagcagtgcaacgacgggagatgtggcgttccacgcgttttatgatgctc 2520
4 – E	ttegetetaegggacaegaaggaettgetgaagttettgaagetetegecagategtagg 2580
	tttttaaagttcggcgcaaagcaagggtctcacggaaaaagagggcgatcgtaatttt 2640
00	geaacccaccggcacggttttttcctccgaaaatcggaaattatgcactttcccaaatat 2700
	ttgaagtgaaatatatttatttactgaaagctcgagtgattatttat
	tttogtggggaaaaggcoattttgtagatttgccgaaaatacttgtcacacacac 282
-	
	acacacateteetteaaatateeetttteeagtgttgaetegaatgetgtegaattega 2880
• •	9tgtccaatgtcaccggcaagccatcgtcggagccgcgcattgagccccgccggctacac 2940
	accgacccgagttcaccgtgacagcgtctcttcagtgtcatcattcacttcttatca 300
6-	

GGATATCTACTCAAGAGCAAGAT acacaattattcatctcctccag

0 0 0 0	320 380 380	440	500	560 560	620	680 680	740	800	860 860	920	086	040	100 100	160 160	220	
1 tttttgcattttctacatcacatgaatgtagaaattaaaagggaaatcaaaatttcta 4	1 AATTIGGGTATCAAAATGGATCCTAAAACCAACATTICAGCATCCGCCAACTCTTCA 1 tcaccggatgctcttctctcggatacagttcaagtcgtaatcgctcattcagcaaagct	ctggaccaactcaataca 	<pre>1 taagccgtgttttcgacgagaaaaccatgtacagaaacttctcgagtcctcgtggaatgt 4 1 </pre>	<pre>1 gcctcatcataaataaatgaacactttgagcagatgccaacacggaatggtaccaaggccg 4 </pre>	1 acaaggacaatcttaccaatttgttcagatgcatgggctatacggttatttgcaaggaca 4	1 atctgacgggaaggtacggcgaaattatattacccaaacgcgaaatttgccattttgcg 4	1 ccgaaaatgtggcgcccggtctcgacacgacaatttgtgttaaatgcaaaatgtataat 4	1 tttgcaaaaacaaaatttgaacttccgcgaaatgatttacctagtttcgaattttc 4	1 gttttttccggctacattatgtgttttttcttagtttttctataatatttgatgtaaaa 4	accgtttgtaaattttcagacaattttccgcatacaaaacttgatagcacgaaatcaatt 4	1 ttctgaattttcaaaattatccaaaatgcacaatttaaaatttgtgaaaattggcaaac 4	1 gytytttcaatatgaaatytatttttaaaaactttaaaaaccactccggaaaagcaataa 5 	aaatcaaaacaacgtcacaattcaaattcaaaagttattcatccgatttgtttatttttg 5	caaaatttgaaaaatcatgaaggatttagaaagttttataacatttttctagatttt 5	1 tcaaaatttttttaacaaatcgagaaaaagggaatgaaaatcgatttaaaaatatcc 5	
4 4 0 0 9	4261 4321 4321	∞ ω	4 4	4501	4561	4621	4681	4741	0 0	4861	4921	4981	5041	5101	5161	•
0 y O O O O O O O O O O O O O O O O O O	ó B ó	oy Oy	oy o	S B	Oy Oy	oy Oy	Db Qy	Oy Oy	oy Oy	do yo	Db Qy	DP Qy	oy Oy	Db Qy	Oy Oy	

Db Ov	5221	acagettcgagagtttgaaattacagtacteettaaaggegeacaececatttgcattgg 5280
qq		ccaaaaatttgtcgtgtcgagaccaggtaccgtagttttgtcgcaaaattgcaccat 534
δy	5281	4
qq	5341	40
δy	5341	GACAATAAACCTTCCTAATCACCAAAAAGTAAAATTGAAATCTTCGAAAAGCCAAAAA 540
qq	5401	tcgaatttcgattttttttttggttttttggtccaaaaaccaaaa 546
Qy	5401	TTCAAAAAAAAGTCGAATTTCGATTTTTTTTTTTTTTTGGTCCCAAAAACCAAAA 546
q	5461	aatttctgcaaaataccaaaaagaaacccgaaaaaatttcccagccttgttcct 5
Qy	5461	SAATTTTCTGCAAAATACCAAAAAGAAACCCGAAAAATTTCCCAGCCTTGTTCT 5
qq	5521	tttccagggaatgctcctgacaattcgagactttgccaaac 5
Qy	5521	
αg	5581	acgaatcacacggagattctgcgatactcgtgattctatcacacggagaagaatgtga 5640
Qy	5581	CGAATCACACGGAGATTCTGCGATACTCGTGATTCTATCACACGGAGAGAGA
qq	5641	atatatgatcttctcaacgcgg 5
QY	5641	INTIGGAGITGATGATATACCGATTAGTACACACGAGATATATGATCTTCTCAACGCGG 5
qq	5701	aaatgctccccgtctggcgaataagccgaaaatcgtttttgtgcaggcttgtcgaggcg 5
Qy	5701	IGCTCCCCGTCTGGCGAATAAGCCGAAAATCGTTTTTTGTGCAGGCTTGTCGAGGCG 5
qq	5761	togttttttattttaattttaatataaatattttaaataaa
Ολ	5761	TICGITITITATITITAATITITAATATATATATATAAAAAATAAT
qa	5821	gacaatggattcccagtcttggattctgtcgacggagttcctgcatttcttcgtcgtg 5
QY	5821	TGACAATGGATTCCCAGTCTTGGATTCTGTCGACGGAGTTCCTGCATTTCTTCGTCGTG 5
qq	5881	gacaatcgagacgggccattgttcaattttcttggatgtgtgcggccgcaagttc 5
δλ	5881	ATGGGACAATCGAGACGGCCATTGTTCAATTTTCTTGGATGTGTGCGGCCGCAAGTTC 5
qq	5941	ttaatttcttgaatgagaatattccttcaaaaatctaaaatagat
Qy	4	GGTIGCAATITAATITCTIGAATGAGAATATICCTICAAAAAATCTAAAATAGATITIT 6
q	0	cagaaagtcccgatcgaaaaattgcgatataattacgaaatttgtgataaaatgac 6
ΟŊ	6001	ICCAGAAAGTCCCGATCGAAAAATTGCGATATAATTACGAAATTTGTGATAAATGAC 6
QQ	6061	ccaatcagcatcgtcgatctccgcccacttcatcggattggtttgaaagtgggggga 6
QY	6061	CGTCGATCTCCGCCCACTTCATCGGATTGAAAGTGGGCGGA 6
qq	6121	tgaattgotgattggttggattttcagtttagagggaatttaaaaattgcttttcga 6
QY	6121	GAATTTAAAATCGCCTTTTCGA 6
q	6181	aaattgattttttcaattttttcgaaaatattccgattattttatattcttt 6
QY	6181	ITAAAAATTGATTTTTTCAATTTTTTTCGAAAAATTTCCGATTATTTAT
qq	6241	cccgtcctgtaaacatttttaaatgataattaataaatttttgcagcaa 6
δy	6241	GAGCGAAAGCCCCGTCCTGTAAACATTTTTAAATGATAATTAAT
QQ	6301	gtgtggagaaagaagccgagccaagctgacattctgattcgatacgcaacgacagctcaa 6360

US-08-287-669-18-10.rng

7381 CCAAC 7441 ttaac 7441 TTAAC 7501 tctcc 7501 tCTCC 7501 AaTTT 7561 AAATTT 7621 CCGTG 7621 CCGTG	11 64736; 3-JUN-19; ed-3 (G2, ed-3 (G2, mbryogen, ydrophob, rotein s; aenorhab	repeat_uni repeat_uni exon intron	exon mutation intron exon	intron repeat_uni	repeat_uni repeat_uni repeat_uni
	H P O K W W W D D A U B				
	6601 tttgcaagcctgccgcgcgtcaacttagattttagtttttagctaaaatgattgttt 6660	6781 aacgaaatttatcgatttttaaatgtaaaaaaatagcgaaaattacatcaaccatcaa 6840	6961 gaaaacaagggatcggtttagatttttccccaaaatttaaattaaatttcagatgacatt 7020 [11111111111111111111111111111111111	7141 ccaattagtttaaaaccatgtgtatattgttatcctatactcatttcactttatcattct 7200	7261 gtttgtgtctcgaacgcataatattttaataactcgttttgaatttgattgttgttgt 7320
6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	90 60 60 60 60 60 60 60 60 60 60 60 60 60	90 00 00 00 00 00 00 00 00 00 00 00 00 0	90 OX 00 OX	d & d &	9 6 6 6

```
CCCCACCAACCTACCGTACCATATTCATTTTGCCGGGAATCAATTTCGATTAATT 7440
                                                                                                                                ttgtaggtecececeateatttecegeceateateteaaattgeattettttteg 7620
                                                                                                                                                                                                                                                                                                2487A) gene.
ns: ced-4; ced-3; mutant; transcriptional regulation;
neesis; cell death; hydrophilic; transmembrane; region;
blc; mutation; amino acid; substitution; RNA splicing;
synthesis; null phenotype; calcium-binding domain; ss.
bditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_type= INVERTED
/note= "inverted w.r.t. repeat at 1356-1472"
2232..236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_type= INVERTED
/note= "inverted w.r.t. repeat at 3126-3243"
3487..3759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 3329-3396"
                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt_type= INVERTED
/note= "Inverted w.r.t repeat at 1490-1614"
1490..1614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /*tag= f
/note= "G>A, from allele n718"
2576..2853
                                                                                                                                                                                   gatatecegattetggteageaaagatet 7653
                                                                                                                                                                                                  __ag=_d
/number=_Intron_1
2450..2575
/*tag=_e
/num*
                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /*tag= g
/number= Intron_2
2854..3107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'number= Intron_3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /number= Exon_1
2367..2429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /number= Exon_2
2487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag= h
/number= Exon_3
                                                                                                                                                                                                                                                                andard; DNA; 7653 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EX
.0/..2429
/*tag= d
/num*
                                                                                                                                                                                                                                                                                                                                                                                                  1356..1472
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3108..4302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3126..3243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3329..3396
                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ıit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nit
                                                                                                                                                                                                                                                                                                                                                                                                   it
                                                                                                                                                                                                                                                                                                                                                                                                                                                      nit
```

```
Query Match 93.1%;
Best Local Similarity 99.8%;
Matches 7636; Conservative
                                                                                                              Query Match
                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                              ŏ
                                                                                                                                                                                                   g
                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                             Dp
                                                                                                                                                                                                                                                                  δy
                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                       Qγ
                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                    òγ
                                                                                                                                                                                                                                                                                                                                                                                                                     Ωp
                                                                                                                                                                                                                                                                                                                                                                                                                                             οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MASSACHUSETTS INST TECHNOLOGY.

HARSACHUSETTS INST TECHNOLOGY.

HORVITZ HR, Shaham S, Yuan J;

HORVITZ HR, Shaham S, Yuan J;

HORVITZ HR, Shaham S, Yuan J;

HORVITZ HR, Shaham S, Yuan J;

HARSACHUSETTS INST TECHNOLOGY.

RAPEL J4-007542/01.

P-PSDB; R53280.

Tolated C elegans cell death genes ced-3 and ced-4 - used to develop agents to increase or prevent cell death in organisms.

Claim 14; Fig 4; 127pp; English.

The sequences given in 064735-45 represent mutations of the C. elegans ced-3 gene. A 2.8 kb mRNA was identified as the ced-3 transcript and was most abundant in embryos, but was also detected in larvae and young aulits, suggesting that ced-3 is expressed not only in cells undergoing cell death. The four largest introns as well as sequences 5' of the start codon contain repetitive elements, some of which have been characterised in non-coding regions of other C. elegans genes, such as fem-1, lin-12 and myob. The Ced-3 protein is 503 amino acids in length. Ced-3 is highly hydrophilic with no significant hydrophobic region that might be a transmembrane region. One region of ced-3 is very rich in serine. It is thought that this region is involved in protein-protein interactions, similar to acid blobs in transcription factors. Of the mutations which occur within the ced-3 gene, eight of
                                                                                                                                                                                                                                                                                                                                                                                                                                 /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 6905-6965"
            "Inverted w.r.t. repeat 3487-3759"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat 6567-6625"
                                                                                                          /rpt_type= INVERTED
/note= "Repeat 3"
                                                                                                                                                      /rpt_type= INVERTED
/note= "Repeat 3"
5547..5760
'rpt_type= INVERTED
                                                                                                                                                                                                                                                                                                                                   /rpt_type= INVERTED 6298..6537
                                                                                                                                                                                                                                  /number= Intron_5
5815..5942
                                                                             Intron_4
                                                                                                                                                                                                                                                                                                  'number= Intron_6
                                                                                                                                                                                                                                                                                                                                                                                                   Intron_7
                                                                                                                                                                                                                                                                   Exon_6
                                                                                                                                                                                                    Exon_5
                                           'number = Exon_4
                                                                                                                                                                                                                                                                                                                                                                  /number = Exon_7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /number= Exon_8
                                                     4635..5546
/*tag= o
                                                                                                                                                                                                  /number= Ex
                     .4634
                                                                                     4688..4719
                                                                                                                               5221..5330
                                                                                                                                                                                                                                                                                                             6062..6138
                                                                                                                                                                                                                                                                                                                                                                             6538..7012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ..7075
                                                                                                                                                                                                                                                       /*tag= t
/number= E
                                                                                                                                                                                                                                                                             ..6297
                                                                                                                                                                                                                                                                                                                                                                                                            6567..6625
                                                                                                                                                                                                                                                                                                                                                                                                                                                       6905..6965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag= aa
                                   C
                                                                                                                                                                                                                          ß
                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                           ×
                                                                                                                                                                                                                                                                                                                                                                                                   /number-
                                                                             'number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note=""
7012..70
                                                                                                                                                                                                                                                                                      /*tag=
                                                                                                                                                                                        /*tag=
             /note=
                                                                                                                                              /*tag=
                                                                                                                                                                                                                          /*tag=
                                                                                                                                                                                                                                                                                                                                                          /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag=
                                                                                                                                                                                                                                                                                                                          /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12-JUN-1992; US-897788
20-NOV-1992; US-979638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-DEC-1993.
14-JUN-1993; U05701
                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                       repeat_unit
                                                                                                                                  repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                             repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    409325685-A
                                                       intron
                                                                                                                                                                                                             intron
                       exon
                                                                                                                                                                              exon
                                                                                                                                                                                                                                              exon
                                                                                                                                                                                                                                                                                                                                              exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     exon
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                               tttagcagaattaatcttgtttcagaaaaaagtccagttttctagattttccgtctta 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 TIGTCGAATTAATATCCCTATTATCACTTTTTCATGCTCATCCTCGAGCGGCACGTCCTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181 AAAGAATIGIGAGGAAACGCGCTCCCATIGACCTCCACACTCAGCCGCCAAAACAAAC 240
the mutations are missense mutations, two are nonsense mutations and two are putative splicing mutations. These mutations establish the null phenotype of the ced-3 gene, confirming that ced-3, like ced-4, function is not essential for viabillity. The ced-3 and ced-4 gene products may be used to develop agents for treating conditions characterised by cell deaths, such as myocardial infarction, stroke, degenerative disease, traumatic brain injury, hypoxia, pathogenic infection, aging or hair loss.

Sequence 7653 BP; 2430 A; 1453 C; 1271 G; 2499 T;
                                                                                                                                                                                                                                                                                                                                                            1 agatctgaaataaggtgataaattaataaattaagtgtatttctgaggaaatttgactgt 60
                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 TTTAGCACAATTAATCTTGTTTCAGAAAAAAGTCCAGTTTTCTAGATTTTTCCGTCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ttgtogaattaatatccctattatcactttttcatgctcatcctcgaggggcacgtcctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241 GTTCGAACATTCGTGTGTTGTGCTCCTTTTCCGTTATCTTGCAGTCATCTTTGTCGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 AGATCTGAAATAAGGTGATAAATTAAATTAAGTGTATTTCTGAGGAAATTTGACTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gttcgaacattcgtgtgttgtgctccttttccgttatcttgcagtcatctttgtcgttt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ttttctttgttctttttgttgaacgtgttgctaagcaattattacatcaattgaagaaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361 ggctcgccgatttattgttgccagaaagattctgagattctcgaagtcgattttataata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tttaaccttggtttttgcattgtttcgtttaaaaaaaccactgtttatgtgaaaaacgat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481 tagtttactaataaaactacttttaaacctttacctttacctcaccgctccgtgttcatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541 geteatagattttegataeteaaateeaaataaatttaegaggeaattaatgtgaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Caaaaacaatcctaagatttccacatgtttgacctctccggcaccttcttccttagccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                721 ctcatttggtatgctcttttcgattttatagctctttgtcgcaatttcaatgctttaaac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    781 aatccaaatcgcattatatttgtgcatggaggcaaatgacggggttggaatcttagatga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   781 AATCCAAATCGCATTATATTTGTGCATGGAGGCAAATGACGGGGTTGGAATCTTAGATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    841 gatcaggagctttcagggtaaacgcccggttcattttgtaccacatttcatcattttcct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481 TAGITTACTAATAAAACTACTITTAAAACCITTACCTITACCTCACCGCTCCGTGTTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                601 CAAAAACAATCCTAAGATTTCCACATGTTTGACCTCTCCGGCACCTTCTTCCTTAGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  721 CTCATTTGGTATGCTCTTTTCGATTTTATAGCTCTTTGTCGCAATTTCAATGCTTTAAAC
                                                                                                                                                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                                      Score 7126; DB 9; Length 7653;
Pred. No. 0.00e+00;
0; Mismatches 17; Indels 0
     8888888888
```

960 960 1020 1080 1080	114 120 120 126 126 132	1320 1380 1340 1440	1500 1500 1560 1620 1620	168 174 174 180 180 186	1920 1920 1980 1980
actettecgtgat 		GGTAAAGCTCCTTT gaatgcgtactgcgc 	ttttttttegaatt	acagestications AcadGalTTATTCCA ittgcatttttaattc TTGCATTTTAATTC	aaaataaaggaact
ttttgttttcggta 		AAAACTACTAAAAATI atcacaaaattctga 	tttttgaaaataat	COCCECCAGES	gttttatgtttgcc
tcaacttgtcccgg 			atttacgggctca 	AGATATGGCATTAGGCATTAGGCATTAGGCATTGGCATTGGCATTGGCATTGGCATTGGCATTGGCATTGGCATTGGCATTGGCATGGCATGGCATGGCATGGCATGGCATGGCATGGCATGGCAGAAAAAAAA	:tcattgaaaattgt
tegtccttggtatc IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		TTTATCGTAAATT TTTATCGTAAATT aaatcggctcgaca	gtagcgcttgtgtc 	TCGGTAATATTTCACG TCGGTAATATTTCACG TGGGTCTCGGCACGCG TILIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	taaaaataacgattc
901 g 901 g 901 G 961 C 961 C 1021 t 1021 t	81 41 01 61	1261 A 1321 t 1321 T 1321 T 1381 a 1381 A	1441 t 1441 T 1501 t 1501 T 1561 g 1561 g	621 681 681 741 741 801	1861 1 1861 1 1921 9
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	60 60 60 60 60 60 60 60 60 60 60 60 60 6	0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Oy Oy

2040	2100	2160		78	348	2340	40			5 6	ń	64	64	2700	2760	2760	82	82	2880	94		0	00	3060	90	3120
981 ttcaagagggtcaaaattttccgattttactgactttcacctttttttt	1 gcagttgttggagtttttgacgaaaactaggaaaaaatcgataaaaattactcaaatcg 	1 agctgaattttgaggacaatgtttaaaaaaaacactatttttccaataatttcactcat 	1 tttcagactaaatcgaaatcaaatcgtactctgactacggctcagtagagaggtcaacc	atcagccgaagatgatgcgtcaagatagaaggagcttgctagagaggaacattatgatgt	:1 ATCAGCCGAAGATGATGCGTCAAGATAGAAGGAGCTTGCTAGAGAGGAACATTATGATGT :1 tetetaateatetaaaaagtcgatgaaattetegaagtteteategeaaacaagtgttga		1 atagtgataatggagatatgattaatgtgagtttttaatcgaataatatttaaaaaa	01 aattgataatataaagaatattttgcagtcatgtggaacggttcgcgagaagagacggg 	1. agatogtgaaagcagtgcaacgacggagagatgtgggcgttccacgcgttttatgatgctc	1 ttogetetaegggaeaegaaggaettgetgaagttettgaagetetegeeagategtagg		1 tttttaaagttoggcgcaaagcaagggtctcacggaaaaaagaggccgatcgtaattt	il tititaaagitcggcgcaaaagcaagggictcacggaaaaaagggggggggg	1. gcaaccaccgcacggttttttcctccgaaaatcgaaattatgcactttcccaaatat 	11 ttgaagtgaaatatattttatttactgaaagctcgagtgattatttat		1 attttggtggggaaaaggcatttgtagatttgcgaaaatacttgtcacacaca	1 ATTTTCGTGGCGCAAAAGGCCATTTTGTAGATTTGCCGAAAATACTTGTCACACACA	acacacatctccttcaaatatcccttttccagtgttgactcgaatgctgtcgaattcga 	 dtgtccaatgtcaccggcaagccatcgtcggagccgcgcattgagccccgccggctacac 		1 ttcaccgacccgagttcaccgtgacagcgtctcttcagtgtcatcattcactcttcttatca	1 TICACCGACCCGAGTICACCGTGACAGCGTCTTTCAGTGTCATCATTCACTTTATCA)1 ggatatctactcaagagcaagatctcgttctcgatcgcgtgcacttcatcatcggatcg)] GGATATCTACTCAAGAAGCAAGATCTCGTTCTCGATCGCGTGCACTTCATCGGATCG	31 acacaattattcatctcctccagtcaacgcatttcccagccaaccttgtatgttgatgcg
198.	204	210:	216.	222	222	228	234	240	246	252				264	270			276	282		288	294	294	300	300	306
Db Qy	Db	Oy Oy	q à	g q	δ D	Qy	Db Qy	Db	q0 ::	S G	Qy	QQ ,	ΟŽ	qa &	QQ	ΟŊ	QQ	οy	op Ov	q	Qy	qq	QY	g	ΟŊ	qq

	cactaaattotgagaatgogoattactoaacatatttgaogogoaaatatotogtago 3180 	aaaatacagtaaccctttaaatgactattgtagtgtcgatttacgggctcgattttcg 3240 	acgaatatatgetegaattgtgacaacgaattttaatttgtcatttttgtgttttett 3300 	gatattittgatcaattaataattatticcgtaaacagacaccagcggtacagtact 336 	tttaaagagttacagtagttttcgcttcaagatattttgaaagaattttaaacattt 342 	aaaaaaaatcatctaacatgtgccaaaacgctttttcaagtttcgcagattttttga 3480 	tttttcattcaagatatgcttattaacacatataattatcattaatgtgaatttcttg 3540 	gaaattttgggcttttcgttctagtatgctctacttttgaaattgctcaacgaaaaa 3600 	atgtggtttgttcatatgaatgaccaaaaatagcaattttttatatattttcccctat 360 	atgttgtgcagaaaatagtaaaaagcgcatgcatttttcgacatttttacatcga 3720 	gacagctcacttcacatgctgaagacgagagacgcggagaaataccacacatcttct 3780 	gtetetegtetteageatgtgaaatgggateteggtegatgtaaaaaaatgtegaata 3840 	gtaaaaaatgcatgcgtttttttacacttttctgcacaaatgaatagggggaaaatgt 3900 	taaaatacattttttgtattttcaacatcacatgattaaccccattatttttcgtt 3960 	gcaacttaaaaagtagagaatattagagcgaaaaccaaaatttcttcaagatattacc 4020 	tattgataattatagatgttaataagcatatcttgaatgaa	gaaacacctgaaaaaaacaaaattctgcgaaaattgaaaaatgcattaaaataca 4140 	agaaaatt
CAATTA	actaaa ACTAAA	tac 	gaata GAATA	atatt ATATT	taaag AAAG	tgaaaaaaaa TGAAAAAAA	ttttca 	aaattt AAATTT	gtggt GTGGT	tgttgt TGTTGT	cagct AGCT	tetete TCTCTO	taaaaa TAAAAA	aaata AAATA	aactt AACTT	tgat GAT	aaacac AAACAC	ttgcat
3061	3121	3181	3241	3301	3361	3421	3481	3541	3601	3661	3721 3721	3781 3781	3841	1068.	3961	4021	4081	4141
õ	g Qy	3 %	QQ 65	g S	Db Qy	g Q	g Q	g S	DP OX	g V	DP OX	g ç	oy Oy	Db Qy	g S	go Qy	g %	g ,

4440 4440 4500 4500 5100 4260 4260 4320 4380 4380 4560 4560 4620 4620 4680 4680 4740 4740 4800 4800 4860 4860 4920 4920 4980 4980 5040 5040 5100 5160 5160 5220 5280 5220 TTTTTGCATTTTTCTACATCACATGAATGTAGAAATTTAAAAAGGGAAATCAAAATTTCTA aatttggggtatcaaaatcgatcctaaaaccaacatttcagcatccgccaactcttcat taagccgtgttttcgacgagaaaaccatgtacagaaacttctcgagtcctcgtggaatgt accgtttgtaaattttcagacaattttccgcatacaaaacttgatagcacgaaatcaatt ggtgtttcaatatgaaatgtatttttaaaaactttaaaaaccactccggaaaagcaataa tttgcaaaaaacaaaattttgaacttccgcgaaaatgatttacctagtttcgaaattttc ttctgaattttcaaaattatccaaaaatgcacaatttaaaaatttgtgaaaattggcaaac GGTGTTTCAATATGAAATGTATTTTTAAAAACTTTTAAAAACCACTCCGGAAAAGCAATAA caaaatttgaaaaaatcatgaaggatttagaaaagttttataaacatttttctagatttt tcaaaaatttttttaacaaatcgagaaaaagagaatgaaaaatcgattttaaaaatatcc 5221 acagcttcgagagtttgaaattacagtactccttaaaggcgcacaccccatttgcattgg 4261 4441 4441 4501 4561 4621 4981 4201 4321 4321 4381 4381 4501 4681 4741 4741 4801 4861 4861 4921 5161 4141 4201 4261 4561 4621 4681 4801 4921 4981 5101 ð qq δ q οy QQ ΩŸ g δy qq QΫ ga οy 임 δ q δŽ Dp δŽ g QΫ́ g Ω g ò g οy ద οy Q δy g ò Ω Qγ g

5280

ò

4 4 0 0 0 0 0	520 520 580 640	700 700 760 760 820	880 940 940 000	.060 .060 .120 .120 .180	2240 5240 5300 5300 5360
atttgtcgtgtcgagaccaggtaccgtagtttttgtcgcaaaaattgcaccat 5:	aatttctgcaaataccaaaagaacccgaaaaatttccagcttgttcct 55	ggagttgatgatataccgattagtacacacgagatatatgatcttctaacgcgg 5'	attgattcccagtcttggattctgtcgacggagttcctgcattcttcgtcgtgfs	agaaagtcccgatcgaaaattgcgatataattacgaaatttgtgataaaatgac 6	aaattgattttttcaatttttcgaaaaatattccgattatttta AAATTGATTTTTCAATTTTTTCGAAAATATTCCGATTATTTA aagccccgtcctgtaaacatttttaaatgataattaataaattt
CCaa 	aaatcc 	ttattg 	gtgac 1111 GTGAC GTTGG GATGG GATGG	attccag 	מוע מוע סווט
22 8 3 4 4 0 4 4 0 4 4 0 4 4 0 4 4 0 4 4 0 4 4 0 4 4 0 4 0 4 0 4 4 0 4 0 4 0 4 0 4 0 4 0 4 0 4 0 4 0 4 0 4 0 4 0 4 0 4 0 4 0 4 0 0 4 0 4 0 0 4 0 4 0 0 4 0 4 0 0 0 4 0 0 0 4 0 0 0 4 0 0 0 0 4 0 0 0 0 4 0	5461 5461 5521 5521 5581 5581	5641 5641 5701 5701 5761	5821 5821 5881 5881 5941	6001 6001 6061 6061 6121	
6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Oy Oy Oy	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6

6420	6480	6540 6540	6600	999	999	6720	6780	584	584	0069	0969	0969	702	7020	7080	7140	7140	7200	726	726	7320	7	7	73	7440		/200
361 tatgtttcgtggagaacagtgctcgtggatcatggttcattca	1 ttctcgacacacgcaaaggatatggatgttgttgagctgctgactga	1 gtcgcttgtggatttcagacatcacagggatcgaatattttgaaacagatgccagaggta 	1 cttgaaacaatgatgtctaacttttaaggacacagaaaataggcagaggctcct	11 tigenacharchig circumatilian characharcharcharcharcharcharcharcharcha	01 ITTGCAAGCCTGCGGGGGTCAACCTAGAATTTTAGTTTTTAGCTAAAATGATTGTTTT	61 gaatattttatgctaatttttttgcgttaaattttgaaatagtcactatttatcgggttt 	21 ccagtaaaaaatctttattagccattggattttactgaaaacgaaaatttgtagtttttc 	8) aacmaaattatmattttaaatdtaaaaaatadcgaaattacatcaaccatcaa			01 acacggttggcgcgcggcaagtttgcaaaacgacgctccgcctctttttctgtgcggctt		61 gaaaacaagggatcggtttagatttttccccaaaatttaaatttaaatttcagatgacatc	61 GAAAACAAGGGATCGGTTTAGATTTTCCCCAAAATTTAAATTTAAATTTCAGATGACATC	21 ccgcctgctcaaaagttctacttttggccggaagcacgaaactctgccgtctaaaattc 	81 actogtgattcattgcccaattgatattgtctgtatcttctccccagttctctttcgt	31 ACTCGTGATTCATTGCCCAATTGATATTGTCTGTATCTTCTCCCCCCAGTTCTTTCGC	41 ccaattagtttaaaaccatgtgtatattgttatcctatactcattcat	#1	01 atcattlctctcccccattlcacacattlccattccatccccaccccacacaca	51 gtttgtgtctcgaacgcataataatttaataactcgttttgaatttgattagttgttgt		21 goccagtatatatgtatgtactatgcttctatcaacaaaatagttcatagatcatcac	21 GCCCAGTATATATGTATGTATGCTTCTATCAACAAAATAGTTTCATACATCACCC	81 coaagcccaccaacctaccgtaccatttcatttttgcggggaatcaatttcgattaatt 91	01 CCAACCCCAACCTACCGTACCATATTTTTTGCCGGGGAATCAATTTTTTGCCGGGGAATCAATTTTTTTT	 ttaacctattttttcgccacaaaaaatctaatatttgaattaacgaatagcattcccatc
636	642	648	654	999	99	666	673	o ve	φ	789)69)69	69	69	7 7	7	1	1- 1	٠ ،		1-						
do Qy	do Qy	qa XX	qo ::	g G	οy	g g	90 8	, d	8 8	ov Ov	2 2	Qy	QQ	QY	DP Qy	qq	QΫ	ag S	Z Z	άn	g	δŽ	g	QY	g :	Š í	g

```
agatttgtaggtccccccatcatttcccgcccatcatctcaaattgcattctttttcg 7620
                                                                      ced-3 (G6297A) gene.
C. elegans; ced-4; ced-3; mutant; transcriptional regulation; embryogenesis; cell death; hydrophilic; transmembrane; region; hydrophobic; mutation; amino acid; substitution; RNA splicing; protein synthesis; null phenotype; calcium-binding domain; ss.
                                                                                                                                                                                                                                                                                            /rpt_type= INVERTED
/note= "inverted w.r.t. repeat at 1356-1472"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 3329-3396"
3329..3396
                                                                                                                                                                                                                                                     /rpt_type= INVERTED
/note= "Inverted w.r.t repeat at 1490-1614"
1490..1614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'rpt_type= INVERTED
'note= "inverted w.r.t. repeat at 3126-3243"
1487..3759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 3782-4070"
3782.4070
/*tag= 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat 3487-3759"
4303..4634
                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                /*tag= d
/number= Intron_1
                                                                                                                                                                                                                                                                                                                                                                                                              Intron_2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                'number= Intron_3
                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag= g
/number= Exon_3
                                                                                                                                                                                                                                                                                                                                'number - Exon_1
                                                                                                                                                                                                                                                                                                                                                                                    Exon_2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /number= Exon_4
4635..5546
                                                                                                                                          .r 12
Q64739 standard; DNA; 7653 BP.
Q64739;
                                                                                                                                                                                                                                                                                               rpt___/note= "il...
"??..2366
                                                                                                                                                                                                                                                                                                                                                                                           2576..2853
/*tag= f
/number= In
                                                                                                                                                                    23-JUN-1994 (first entry)
                                                                                                                                                                                                                                           1356..1472
                                                                                                                                                                                                                                                                                                                                          367..2429
                                                                                                                                                                                                                                                                                                                                                                 2450..2575
                                                                                                                                                                                                                                                                                                                                                                          /*tag= e
/number= E
                                                                                                                                                                                                                                                                                                                                                                                                                     854..3107
                                                                                                                                                                                                                                                                                                                                                                                                                                              108..4302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1126..3243
                                                                                                                                                                                                                                                   /*tag= a
                                                                                                                                                                                                                                                                                       *tag= p
                                                                                                                                                                                                                                                                                                                                                                                                                                                       *tag= h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= k
                                                                                                                                                                                                                          Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *tag=
                                                                                                                                                                                                                                          repeat_unit
                                                                                                                                                                                                                                                                            repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_unit
                                                                                                                                                                                                                                                                                                                                        intron
                                                                                                                                                                                                                                                                                                                                                                                            intron
                                                                                                                                                                                                                                                                                                                                                                                                                                               intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           intron
                                                              7561
                                                                                                                                                                                                                                                                                                                exon
                                                                                                                                                                                                                                                                                                                                                                   exon
                                                                                                                                                                                                                                                                                                                                                                                                                      exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    exon
                                                                                                                                                                                                                                  Kev
                                                                                                                                          RESULT
                         g
                                                                              ò
                                                                                              g
                                            ò
                                                           g
                                                                                                                 ò
```

```
With: 94 **Univalent to the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat at 6905-6965"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat 6567-6625"
7012..7075
                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag= u
/note= "C>T, from allele n717"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (MASI ) MASSACHUSETTS INST TECHNOLOGY. HORVILZ HR, Shaham S, Yuan J; WPI; 94-007542/01.
                                                                       /rpt_type= INVERTED /note= "Repeat 3"
                                                                                                                                                 /rpt_type= INVERTED /note= "Repeat 3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /rpt_type= INVERTED 6298..6537
                 Intron_4
                                                                                                                                                                                                                                                                                 'number= Intron_5
                                                                                                                                                                                                                                                                                                                                                                                            'number= Intron_6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'number= Intron_7
                                                                                                                                                                                                                             Exon_5
                                                                                                                                                                                                                                                                                                                                        Exon_6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /number= Exon_8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'number= Exon_7
                                                                                             /note= "Rep
5221..5330
                                 4688..4719
                                                                                                                                                                                                                                                                                                   5815..5942
                                                                                                                                                                                    ..5760
                                                                                                                                                                                                                                            5761..5814
                                                                                                                                                                                                                                                                                                                                                     5943..6297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6062..6138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .6965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5538..7012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ..6625
/*tag= n
                                                                                                                                                                                                                                                                                                                        Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= v
                     /numper=
                                                                                                                                                                                                                           'number=
                                                                                                                                                                                                                                                                                                                                        "number=
                                                                                                                                                                                                         /*tag=
                                                                                                                                                                                                                                                                                                                        /*tag=
                                                                                                                                                                                                                                                                                                                                                                              /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-DEC-1993.
14-JUN-1993; U05701.
12-JUN-1992; US-897788.
20-NOV-1992; US-979638.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                    repeat_unit
                                                                                                              repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               W09325685-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                               mutation
                                                                                                                                                                                                                                            intron
                                                                                                                                                                                                                                                                                                                                                         intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   intron
                                                                                                                                                                                        exon
                                                                                                                                                                                                                                                                                                     exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             exon
```

οù	0 8	09	120	180	4 4	300	360	420	480	540	009	099	720	780	840	006	096
ucts may be used to develop agents for treating conditions acterised by cell deaths, such as myocardial infarction, strok interative disease, traumatic brain injury, hypoxia, pathogenic ction, aging or hair loss. 1453 C, 1271 G, 2499 T;	<pre>latch 93.1%; Score 7126; DB 9; Length 7653; cal Similarity 99.8%; Pred. No. 0.00e+00; cal Conservative 0; Mismatches 17; Indels 0; Gap</pre>	. agatctgaaataaggtgataaattaataaattaagtgtatttctgaggaaatttgactgt 	tttagcagaattaatcttgtttcagaaaaaagtccagttttctagattttccgtctta 	tigicgaattaatatcctattatcacttittcaigctcatcctcgagcggcacgtcctc	aaagaattgtgagagcaaacgegcteccattgacetecacaeteageegeeaaacaaa 	gttcgaacattcgtgtgttgtgctccttttccgttatcttgcagtcatctttgtcgttt 	ttttctttgttcttttgttgaacgtgttgctaagcaattattacatcaattgaagaaaa 	ggctcgccgatttattgttgccagaaagattctgagattctcgaagtcgattttataata 	tttaaccttggtttttgcattgtttcgtttaaaaaaaccactgtttatgtgaaaacgat 	tagtttactaataaaactacttttaaacctttacctttacctcaccgctccgtgttcatgillililililililililililililililililili	gctcatagattttcgatactcaaatccaaaataaatttacgagggcaattaatgtgaaa 	. caaaaacaatcctaagatttccacatgtttgacctctccggcaccttcttccttagcccc 	accactccatcacctctttggcggtgttcttcgaaacccacttaggaaagcagtgtgtat	ctcatttggtatgctcttttcgattttatagctctttgtcgcaatttcaatgctttaaac	. aatccaaatcgcattatatttgtgcatggaggcaaatgacggggttggaatcttagatga 	gatcaggagctttcagggtaaacgcccggttcattttgtaccacatttcatcattttcct	. gtcgtccttggtatcctcaacttgtcccgttttgttttcggtacactcttccgtgatgc
prod char degen infe	uery Ma est Loc atches		61	121	181	241	301	361	421	481	541	601	661	721	781	841	901
88888	QWE	03 03	go Oy	d y	do yo	Oy Oy	Qy Qy	DP QY	go V	Db Qy	oy Oy	g &	g &	දු පු	oy Oy	g &	g g

g &	961	cacctgtctccgtctcaattatcgtttagaaatgtgaactgtccagatgggtgactcata 1020
QQ	C)	ttgctgctgctacaatccactttctttctcatcggcagtcttacgagcccatcataaac 1080
Qy	1021	GCTGCTGCTACAATCCACTTTCTTTTCTCATCGGCAGTCTTACGAGCCCATCATAAA
q _O	80	tctccaaattgttacgcaa 114
δλ	œ	TTTTTTCCGCGAAATTTGCAATAAACCGGCCAAAAACTTTCTCCAAAATTGTTACGCAA 114
oy Oy	1141	atatcttctcaatgtttatg
qq	1201	ogigigotaacatottattttataatatttoogotaaaattoogatttttgagtatt
δy	1201	
QQ		taatagcaccgaaactactaaaatggtaaaagctccttt 132
δλ	1261	TTTATCGTAAAATTATCATAATAGCACCGAAAACTACTAAAAATGGTAAAAGGTCCTT
g		aaaattctgagaatgcgtactgcgc 138
Qy	1321	aaatcggctcgacattatcgtattaaggaatcacaaaattctgagaatgcgtactgcg
qq		4
ΟŊ	1381	acatatttgacggcaaaatatctcgtagcgaaaactacagtaattctttaaatgacta
QQ	1441	ttgaaaataattttttttttcgaattt 1
QY	1441	GTAGCGCTTGTCTCGATTTACGGGCTCAATTTTTGAAAATAATTTTTTTT
Dp		aaatogtcacaacgctacagtagtcatttaaaggattactgtagttcta 1.
οy	1501	GATAACCCGTAAATCGTCACAACGCTACAGTAGTCATTTAAAGGATTACTGTAGTTCT
Op	1561	tttgcgcgccaaatatgactgtaatacgcat
δλ	1561	CTACGAGATATTTTGCGCGCCAAATATGACTGTAATACGCATTCTCTGAATTTTGTGT
q	1621	caagattttggcattccactt
Qy	1621	CCGTAATAATTTCACAAGATTTTGGCATTCCACTTTAAAGGCGCACAGGATTTATTCC
Db	1681	cacggaaaaagtttgatagacttttaaat
οy	1681	TGGGTCTCGGCACGCAAAAAGTTTGATAGACTTTTAAATTCTCCTTGCATTTTAATT
qq	4	tttttaaaatcagttttctaatatt 180
QΫ	1741	ractaaaattttcgtgaatttttctgttaaaatttttaaaatcagttttctaatat
Op	1801	jaaacaaaaacacaacaaacattt
Qy	1801	TCCAGGCTGACAAACAGAAACACAACAACAACAACATTTTAAAAATCAGTTTTCAAA
qq	1861	.aacgatttctcattgaaaattgtgttttatgtttgccaaaataaag
δλ	1861	TAAAAATAACGATTTCTCATTGAAAATTGTTTTTTTTTT
qo :	1921	gattcaaaacaattttaacaaaaaaaaacccaaaattcgccagaaatcaaga https://www.mannah.com/assassassassassassassassassassassassass
Ž į	4	
a 8	1981	ttcaagagggtcaaaattttccgattttactgactttcacctttttttt
ζ.	o o	

caaatcg 2100 CaaarcG 2100 cactcat 2160 Sqcaacc 2220 	atgatgt 2280 ATGATGT 2280 gtgttga 2340 GTGTTGA 2340 aaaaaa 2400	246 246 252 252	cgtag cgraG aattt 	AAATAT 270 acacta 276 ACACTA 276 acacac 282 	attcga 288 11111 ATTCGA 288 ctacac 294 CTACAC 294 ttatca 300	TTATC ggatc GGATC gatgc GATGC
atcgataaaattact 	ttagagagaacatt	099ttcgcgagaag 	Jaagetetegeeaga 	AAATTATGCACTTTCC tgattatttattttta 	gactcgaatgctgtcga 	TGTCATCATTCACTTY ### STATE ATTCATT ### STATE ATTCATT ### STATE ATTCATT ### STATE ATTCATT ### STATE ATTCATT ### STATE ATTCATT ### STATE ATTCATT ### STATE ATTCATT ### STATE ATTCATT ### STATE ATTCATT ### STATE ATTCATT ### STATE ###
gaaactaggaaaaa 	99agctt 	tttgcagtcatgtg 	acttgctgaagttct 		cettttccagtgtb 	GACAGCGTCTTCA Letcgttctcgatcg
tgttggagttttgac 	ccgaagatgatgcgtc 	ataatataaagaatat 	LCtacgggacacgaag 		Catctccttcaaatatc [GACCCGAGTTCACCG ctactcaagagcaag
9cagt 1 CCAGT 1 1 AGCTG	atcago tctctz TCTCTZ atagtg	attg 	tcgc - - - - - - - - - - - -	CCAACC CCAACC ttgaac TTGAAC	acacac 	TCAC gata 3ATA 3ATA CACA PCACA
2041 2041 2101 2101 2161 2161	2221 2221 2281 2281 2341 2341	0 4 4 6 0 0	2521 2521 2581 2581 2581	9 7 7 7	8 8 8 2 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	2941 3001 3001 3061 3061
a	9 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	8 6 6 6	6 6 6 6 6	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 8 8 8 8 8.

	gctcgattttcg 3240 	ttgtgttttctt 3300 TTGTGTTTCTT 3300	cggtacagtact 3360 CGCTACAGTACT 3360	ttttaaacattt 3420 TTTTAAACATTT 3420	cagatttttga 3480 CAGATTTTTGA 3480	gtgaatttcttg 3540 GTGAATTTCTTG 3540	tcaacgaaaaa 3600 TCAACGAAAAA 3600	atttcccctat 3660 ATTTCCCTAT 3660	ttttacatcga 3720 TTTTACATCGA 3720	acacatctttct 3780 ACACATCTTTCT 3780	aaatgtcgaata 3840 AAATGTCGAATA 3840	ggggaaaatgt 3900 GGGGGAAATGT 3900	tatttttcgtt 3960 TATTTTTCGTT 3960	caagatattacc 4020 	gcaaaaatatgt 4080 GCAAAATATGT 4080	cattaaaataca 4140 	tcaaaatttcta 4200 TCAAATTTCTA 4200	caaaaaagagga 4260
	ttaaatgactattgtagtgtcgatttacgg 	attgtgacaacgaattttaatttgtcattt 	taataaattatttccgtaaacagacaccag 	agttttcgcttcaagatattttgaaaagaa 	catgtgccaaaagctttttcaagtttcg 	tgcttattaacacatataattatcattaat 	ogttctagtatgctctacttttgaattgc 	tgaatgaccaaaatagcaatttttatatat 	tagtaaaaagcgcatgc 	tgctgaagacgagacgcggagaaatacc 	atgtgaaatgggatcteggtegatgtaaaa: 	tttttttacacttttctgcacaaatgaata 	tatttttcaacatcacatgattaacccat 	gagcgaaaaccaaaatttctt 	tgttaataagcatatcttgaatgaaagtca 	ccaaaaattctgcgaaaattgaaaaag 	tcacatgaatgtagaaaattaaaagggaaa [.] 	aacattgcgaaattaaaatgtgcgaaacgt
	gaaaaatacagtaaccct 	aaacgaatatatgctcga 	ttgatatttttgatcaat! TTGATATTTTGATCAAT	ctttaaagagttacagt 	tgaaaaaaaatcatctaa TGAAAAAAATCATCTAA	tttttttcattcaagata TTTTTTCATTCAAGATA	tagaaattttgggctttt 	tcatgtggtttgttcatat 	tcatgttgtgcagaaaat TCATGTTGTGCAGAAAAA	acgacagctcacttcacat 	gegtetegtetteages 	atgtaaaaaatgcatgcgt 	attaaaatacatttttgt 	gagcaacttaaaaagtaga 	tttattgataattatagat 	gcgaaacacctgaaaaaaaa 	tttttgcatttttctacat 	gaggatataattgaatgaa
3121	3181	3241	3301	3361	3421	3481	3541	3601	3661	3721	3781	3841	3901	3961	4021	4081	4141	4201
ΟŸ	DP QY	g S	DP QY	Db Qy	DP QA	Dp Qy	do Qy	DP QY	g Qy	Db Qy	Db Qy	oy Oy	DP Qy	Db Qy	DD Qy	Db Qy	Db Qy	qq

26 2 3 3 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	4500 4500 4560 4560 4620	4680 4740 4740 4800	98 86 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	4 4 0 0 6 6	5220 5220 5280 5280 5340 5340
AGGATATAATTGAATGAAACATTGCGAAATTAAAATGTGCGAAACGTCAAAAAGGGGGATLTGGGTATGAATGAAAATGCGAAATGAGGAAATGGGGAAACGTCAAAAAGGGGGTATTGGGTATCAGATCGGCCAACTCTTCAGGTTCAAAATCGATCCTAAAACCAACATTTCAGCATCCTCGCCAACTTTTCAGGTATCAAAATCGATCCTAAAACCAACACATTTCAGCATCGCCACACTTTTCAGCATGCTCTTCATCAGGAAACCGATGCTAATTGAGGATGCTCTTCTCTCTC	taagccgtgttttcgacgagaaaccatgtacagaaacttctcgagtcctcgtggaatgt [atctgacgggaaggtacggcgaattatattaccaaacgcgaaatttgcattttgcg 	cattatgtgttttttcttagtttttctataatatttgatgtaa 	ggtgtttcaatatgaaatgtatttttaaaaactttaa 	tcaaaattttttttaacaaatogagaaaagagaatgaaaatcgattttaaaaatatcc
8 8 7 7 9 9 0	4441 4441 4501 4561 4561	4621 4621 4681 4741 4741	4801 4861 4861 4921 4921	4981 4981 5041 5101 5101	5161 5161 5221 5221 5281
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	oy Oy Oy	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 6 6 6 6 6	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

```
LT 13
Q64738 standard; DNA; 7653
Q64738;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /number= Ex
2576..2853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /number= In
4688.4719
/*tag= 0
                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2450..2575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /number= Ex
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3108..4302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3126..3243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ..3759
                                                                                                                                                                                                                                                                                                                    1356..1472
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2854..3107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ..3396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4635..5546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4303..4634
                                                                                                                                                                                                                                                                                                                                                                                                                                          O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /*tag= e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag= m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /numper=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag=
                                                                                                                                                                                                                                                                                                                                                                                     /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag=
                                                                                                                                                                                                            23-JUN-1994
                                                                                                                                                                                                                                                                                                                                                                      repeat_unit
                                                                                                                                                                                                                                                                                                                    repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        intron
                    7501
                                               7561
                                                                         7561
                                                                                                                                                                                                                                                                                                                                                                                                                          exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 exon
                                                                                                                                                                  RESULT

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00

0,00
                                         Q
                                                                                                  용
                                                                        δ
                                                                                                                            ò
                                                                                                                                                                             6720
                                                                                                                                                                                                                                                6720
                                                                                                                                                                                                                                                                                                   6780
                                                                                                                                                                                                                                                                                                                                                 6781 AACGAAATTTATCGATTTTTAAATGTAAAAAAAATAGCGAAAATTACATCAACCATCAA 6840
                                                                                                                                                                                                                                                                                                                                                                                 9000
                                                                                                                                                                                                                                                                          6780
                                                                                                                                                                                                                                                                                                                                                                                                                                     0969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATCATITCTCTTCCCATITTCACACATITCCATITCTCTACGATAATCTAAAATTATGAC 7260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTTTGTGTCTCGAACGCATAATAATTTTAATAACTCGTTTTGAATTTGATTAGTTGTTGT 7320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gcccagtatatatgtatgtactatgcttctatcaacaaaatagtttcatagatcatcacc 7380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ttaacctattttttcgccacaaaaatctaattttgaattaacgaatagcattcccatc 7500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   THANCCIATTITITCGCCACAAAAATCTAATATTTGAATTAACGAATAGCATTCCCATC 7500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tctcccgtgccggaatgcctcccggccttttaaagttcggaacatttggcaattatgtat 7550
                                                   cttgaaacaaacaatgcatgtctaacttttaaggacacagaaaaataggcagaggctcct
                                                                                                                                                              7261 gtttgtgtctcgaacgcataataattttaataactcgttttgaatttgattagttgttgt
                                                                                                                                                                                                                  gaatattttatgctaatttttttgcgttaaattttgaaatagtcactatttatcgggttt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gaaaacaagggatcggtttagattttccccaaaatttaaatttcagatgacatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  atcatttctcttcccattttcacacatttccatttctctacgataatctaaaattatgac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6541
                                                                                                                                                              6601
                                                                                                                                                                                                                 6661
                                                                                                                                                                                                                                           6661
                                                                                                                                                                                                                                                                                                                        6781
                                                                                                                                                                                                                                                                                                                                                                           6841
                                                                                                                                                                                                                                                                                                                                                                                                     6841
                                                                                                                                                                                                                                                                                                                                                                                                                                6901
                                                                                                                                                                                                                                                                                                                                                                                                                                                       6901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7501
                           ò
                                                   g
                                                                               ò
                                                                                                        8
                                                                                                                                                            a
                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                      d
                                                                                                                                  ò
                                                                                                                                                                                       ò
                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                   οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Op
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
```

```
TCTCCCGTGCCGGAATGCCTCCCGGCCTTTTAAAGTTCGGAACATTTGGCAATTATGTAT
                                                                aaatttgtaggtcccccccatcatttcccgcccatcatctcaaattgcattcttttcg
ced-3 (C59401) gene.
C. elegans; ced-4; ced-3; mutant; transcriptional regulation; embryogenesis; cell death; hydrophilic; transmembrane; region; hydrophobic; mutation; amino acid; substitution; RNA splicing; protein synthesis; null phenotype; calcium-binding domain; ss. Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_type= INVERTED
/note= "inverted w.r.t. repeat at 1356-1472"
2232..236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_type= INVERTED
/note= "Inverted w.r.t repeat at 1490-1614"
1490..1614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_type= INVERTED
/note= "inverted w.r.t. repeat at 3126-3243"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Inverted w.r.t. repeat at 3782-4070"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat at 3329-3396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat 3487-3759"
                                                                                                                                                                                  7621 ccgtgatatcccgattctggtcagcaaagatct 7653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /rpt_type= INVERTED
/note= "Inverted w.r.t.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'rpt_type= INVERTED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Intron_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Intron_2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Intron_3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Intron_4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /number= Exon_1
2367..2429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Exon_2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Exon_3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Exon_4
                                                                                                                                                                                                                                                                                                    BP.
```

```
Foreign to a second death genes ced-3 and ced-4 - used to develop agents to increase or prevent cell death in organisms of develop agents to increase or prevent cell death in organisms.

For Claim 14; Fig 4; 127pp; English.

The sequences given in Q6473-45 represent mutations of the C. elegans ced-3 gene. A 2.8 kb mRNA was identified as the ced-3 transcript and was most abundant in embryos, but was also detected in larvae and young dults, suggesting that ced-3 is expressed not only in cells undergoing cell death. The four largest introns as well as sequences 5' of the start codon contain repetitive elements, some of which have been characterised in non-coding regions of other C. elegans genes, such as fem-1, lin-12 and myob. The Ced-3 protein is 503 amino acids in length. Ced-3 is highly hydrophilic with no significant hydrophobic region of the mutations which occur within the ced-3 is involved in protein-protein interactions, similar to acid blobs in transcription factors. Of the mutations which occur within the ced-3 gene, eight of the mutations are missense mutations. These mutations and two are putative splicing mutations. These mutations establish the count phenotype of the ced-3 gene, confirming that ced-3 ink ced-4, gene continon is not essential for viabillity. The ced-3 and ced-4 gene continon is not essential for viabillity. The ced-3 and ced-4 gene continon is not essential for viabillity, the ced-3 and ced-4 gene continon is not essential for viabillity, the ced-3 and ced-4 gene continon is not essential for viabillity, the ced-3 and ced-4 gene continon is not essential for viabillity, the ced-3 and ced-4 gene cod-degenerative disease, tranmatic brain injury, hypoxia, pathogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nverted w.r.t. repeat at 6905-6965"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_type= INVERTED
/note= "Inverted w.r.t. repeat 6567-6625"
7012..7075
                                                                                                                                                                                                                                                                 /*tag= t
/note= "C>T, from allele n1165"
5943..6297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-NOV-1992; US-979638.
(MASI ) MASSACHUSETTS INST TECHNOLOGY.
HOrvitz HR, Shaham S, Yuan J;
/rpt_type= INVERTED
/note= "Repeat 3"
5221..5330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_type= INVERTED
/note= "Inverted w.1
6905..6965
                                                                /rpt_type= INVERTED
/note= "Repeat 3"
5547..5760
                                                                                                                                                                                                                                                                                                                                                                                /rpt_type= INVERTED 6298..6537
                                                                                                                                                                                                                                                                                                                  /*tag= u
/number= Intron_6
                                                                                                                                                                                   Intron_5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Intron_7
                                                                                                                                  Exon_5
                                                                                                                                                                                                                                  'number= Exon_6
                                                                                                                                                                                                                                                                                                                                                                                                                               Exon_7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /number= Exon_8
                                                                                                                                                 5761..5814
                                                                                                                                                                                                                                                                                                                                             6062..6138
                                                                                                                                                                                                5815..5942
                                                                                                                                                                                                                                                                                                                                                                                                                                             6538..7012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ..6625
                                                                                                                                                                  /*tag= r
                                                                                                                                                                                                                                                                                                                                                                 /*tag= v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag= x
                                                                                                                                  'number=
                                                                                                                                                                                                                                                                                                                                                                                                                               /number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'number=
                                                                                                                                                                               'number=
                                                                                                                                                                                                               /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         U05701.
US-897788.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /*tag=
                                                                                                                    /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Horvitz HR, Shaham
WPI; 94-007542/01.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P-PSDB; R53282
                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2-JUN-1992;
                                   repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9325685-A.
                                                                                                                                                                                                                                                 mutation
                                                                                                                                                 intron
                                                                                                                                                                                                                                                                                                 intron
                                                                                                                                                                                                                                                                                                                                                                                                                                               intron
                                                                                                                                                                                                  exon
                                                                                                   exon
                                                                                                                                                                                                                                                                                                                                                                                                 exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             exon
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                961 cacctgtctccgtctcaattatcgtttagaaatgtgaactgtccagatgggtgactcata 1020
                                                                                                                                                                                                                                                                                                                                                                           61 tttagcagaattaatcttgtttcagaaaaaagtccagttttctagatttttccgtctta 120
                                                                                                                                                         120
                                                                                                                                                                                 180
                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  900
                                                                                   9
                                                                                                          9
                                                            Gaps
                                                                                                                                              ttttctttgttctttttgttgaacgtgttgctaagcaattattacatcaattgaagaaaa
                                                                                                                                                                                                                                                                                                                                                                                                                           1 agatotgaaataaggtgataaattaataaattaagtgtatttotgaggaaatttgactgt
                                                                                                                                                                                 121 ttgtcgaattaatatccctattatcactttttcatgctcatcctcgagcggcacgtcctc
                                                                                                                                                                                            gttcgaacattcgtgtgttgtgctccttttccgttatcttgcagtcatctttgtcgttt
                                                                                                                                                                                                                                                                                                     241 GTTCGAACATTCGTGTGTGTGCTCCTTTTCCGTTATCTTGCAGTCATCTTTGTCGTTT
                                                                                                                                                                                                                                                                                                                                                     301 ITTICITIGITCITITIGITGAACGIGITGCIAAGCAAITAITACAICAAITGAAGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481 tagtttactaataaaactacttttaaacctttacctttacctcaccgctccgtgttcatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541 gotcatagattttcgatactcaaaatccaaaataaatttacgagggcaattaatgtgaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661 accactccatcacctctttggcggtgttcttcgaaacccacttaggaaagcagtgtgtat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ctcatttggtatgctcttttcgattttatagctctttgtcgcaatttcaatgctttaaac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 aatccaaatcgcattatatttgtgcatggaggcaaatgacggggttggaatcttagatga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781 AATCCAAATCGCATTATATTTGTGCATGGAGGCAAATGACGGGGTTGGAATCTTAGATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gatcaggagctttcagggtaaacgcccggttcattttgtaccacatttcatcatttcct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 901 grogicotiggialocicaaciigiocoggiiilgiiiloggiacaciciicogigaigo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 AGAICTGAAAIAAGGIGAIAAAIIAAAITAAAITAAGIGIATITCTGAGGAAAITIGACTGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481 TAGTITACTAATAAAACTACTTITAAACCTTTACCTTTACCTCACCGCTCCGTGTTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          841 GATCAGGAGCTTTCAGGGTAAACGCCCGGTTCATTTTGTACCACATTTCATCATTTTCCT
                                                          ;
0
                                     Length 7653;
                                                             Indels
             1272 G;
                                                             Mismatches 17;
                                   Score 7126; DB 9;
Pred. No. 0.00e+00;
            1452 C;
                                                            ;
0
 aging or hair loss. 7653 BP; 2429 A;
                                     93.1%;
                                                99.88;
                                               Best Local Similarity 99.8%;
Matches 7636; Conservative
infection,
               Sequence
                                     Query Match
                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    781
                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    841
 ည္တင္တ
                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                          Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                          8
                                                                                                                                                         δ
                                                                                                                                                                                g
                                                                                                                                                                                                        ò
                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                      ó
                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                            엄
                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                   ο
                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Óγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
```

GIGAACISICCAGAIGGGIGACICAIA 1020 CGGCAGTCTTACGAGCCCATCATAAAC 1080 aaaaactttctccaaattgttacgcaa 1140
AAACTITCTCCAAATIGITAGGCAA 114 atgatttcttcgcagcactttctct 120
AAACTITCTCCAAATIGITACGCAA 114 atgatttcttcgcagcactttctct 120
AAACTITCTCCAAATTGTTACGCAA 114 atgatttcttcgcagcactttctct 120 ATGATTTCTTCGCAGCACTTTCTCT 120 ctaaaattccgatttttgagtatta 126
AAAACTTTCTCCAAATTGTTAGGCAA 114 catgatttcttcgcagcactttctct 120 lilililililililili rafGATTTCTGCAGCACTTTCTCT 120 gctaaaattccgatttttgagtatta 126 scraaaattccgattttTgagtatta 126 scraaaattcgattttTgagtatta 126 ctactaaaaatggtaaaagctcctt 132 ctactaaaaatggtaaaagctcctt 132 stactaaaaatggtaaaagctcctt 132 stactaaaaatggtaaaagctcctt 132 stactaaaaatggtaaaagctcctt 132 stactaaaaatggtaaaagctcctt 132
AAAACTTTCTCCAAATTGTTAGGGAA 114 catgatttcttcgcagcactttctct 120 l
AAAACTTCTCCAAATTGTTAGGGAA 114 catgattcttcgcagcacttctct 120
AAAACTTCTCCAAATTGTTAGGGAA 114 catgatttcttcgcagcactttctct 120 iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii
AAAACTTTCTCCAAATTGTTAGGGAA 114 atgatttcttcgcagcactttctct 120
AAAACTTTCTCCAAATTGTTAGGGAA 114 atgatttcttcgcagcactttctct 120
AAACTTTCTCCAAATTGTTAGGGAA 114 catgatttcttcgcagcactttctct 120 ininininininininininininininininininin
AAAACTTTCTCCAAATTGTTAGGGAA 114 catgatttcttcgcagcactttcttct 120 lilililililililililililililililililili
AAAACTTTCTCCAAATTGTTAGGGAA 114 atgatttcttcgcagcactttctct 120
AAACTITCTCCAAAITGITACGGAA 110 catgatttcttcgcagcactttctct 120 lilililililililililililililililililili
AAACTITCICCAAATIGITAGGGAA 114 Tatgatticttogcagcacttictict 120 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII
AAACTITCTCCAAATTGITACGCAA 114 Catgatttcttcgcagcactttcttct 120 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII
AAACTITCTCCAAAITGITACGCAA 11 catgatttcttcgcagcacttctct 12 i
AAACTITCTCCAAATTGTTACGCAA 114 atgattcttcgagaactcttctct 120 craaaattcctcgagcactttctct 120 craaaattccgatttttgagtatta 126 TIAAAATTCTTGGAGCACTTTCTT 132 aaaattctgagaatgcgtactgcgc 138 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII

2101		16
g i	SCIGAATITIGAGGACAATGITTAAAAAAAACACTATTITICCAATATTITICACTCA	7
∰ — ∰	ttcagactaaatcgaaaatcaaatcgtactctgactacggtcagtagagaggtcaacc 	2220
$\omega - \alpha$	aagatagaaggagcttgctagagag 	2280
	tetetagteatetaaaagtegatgaaattetegaagtteteategeaaaeaagtgttga 	2340
	agtgataatggagatatgattaatgtgagtttttaatcgaataatta 	Ö
	AGIGATAAIGGAGAIATGAITAAIGIGAGITITITAAIGGAAIAATAAITITAAAAAA. + raataatataaanaatatttturgartgatatataan	2400
	A STITICATION TO A STATE A STA	2460
	agatcgtgaaagcagtgcaacgacggggagatgtggcgttccacgcgttttatgatgctc	2520
	arcergaaagcagrecaacgacgggagargregccrrcaacgcgrrrargargcr	2520
	ttcgctctacgggacacgaaggacttgctgaagttcttgaagctctcgccagatcgtagg	2580
-	ttttaaagttcggcgcaaaagcaagggtctcacggaaaaagaggccgatcgtaattt	2640
	JITCGGCGCAAAAGCAAGGGTCTCACGGAAAAAAGAGGCGGATCC	2640
Н	aacccaccggcacggtttttcctccgaaaatcggaaattatgcactttcc	2700
	CAACCCACGGCACGGTTTTTCCTCCGAAAATCGGAAATTATGCACTTTCCCAAATA	2700
	atat 	2760
	attttogtggcgcaaaggccattttgtagatttgccgaaatacttgtcacacaca	2820
Н	acacatctccttcaaatatccctttttccagtgttgactcgaatgctgtcgaatt	2880
-	CACACATCTCCTTCAAATATCCCTTTTTTCCAGTGTTGACTCGAATGCTGTCGAATTCG	2880
	caatgtcaccggcaagccatcgtcggagccgcgcattgagcccgcc	94
н	STCCAATGTCACCGGCAAGCCATCGTCGGAGCCGCGCATTGAGCCCCGCCGGCTACA	2940
	caccgacccg	3000
- ۲		
	System Control	90
	aattattoatotocagtoaacgcatttoccagccaaccttgtatgttgatgc	3120
	ATCTCCTCCAGTCAACGCATTTCCCAGCC	3120
	attetgagaatgegeattaeteaae	3180
-	ACTARATICTGAGAATGCGCATTACTCAACATATTTGACGCGCAAATATCTCGTAG	3180

0 0 0 0	0 0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0
9 324 	T 336 t 342 T 342	a 348 	g 354 G 354	1 360 1 360	t 366 1 1 366	a 372 372	t 378 T 378	a 384 384	t 390 1 390	t 396 T 396	402	t 408 T 408	a 414 A 414	a 420 420	a 426 A 426	t 432
gaaaatacagtaaccctttaaatgactattgtagtgtcgatttacgggctcgattttc GAAAAATACGTAACCTTTAAATGACTATTGTAGTCTCGATTTACGGGCTCGATTTTC aaagaatatatgctcgaattgtgacaacgaattttaatttgtcatttttgttttct HIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	TICATATITITGATCAAITAATAATTATTTCCGTAACAGACAGCGCTACAGTAC CLTLtaaagagttacagtagtttcgcttcaagatattttgaaagaattttaaacatt	tgaaaaaaatcatctaacatgtgccaaacgctttttcaagtttcgcagattttttt 	tttttttcattcaagatatgcttattaacacatataattatcattaatgtgaatttcttg 	tagaaattttgggctttcgttctagtatgctctacttttgaaattgctcaacgaaaaa 	tcatgtggtttgttcatatgaatgaccaaaaatagcaattttttatatattttcccta 	tcatgttgtgcagaaaatagtaaaaagcgcatgcattttcgacatttttacatcgs 	acgacagctcacttcacatgctgaagacgagagacgcggagaaataccacacatttc 	gegtetetegtetteageatgtgaaatgggateteggtegatgtaaaaagtgtegat 	atgtaaaaatgcatgcgtttttttacacttttctgcacaaatgaatagggggaaatg 	attaaaatacatttttgtatttttcaacatcacatgattaaccccattattttttgt 	gagcaacttaaaaagtagagaatattagagcgaaaaccaaaatttcttcaagatattacc 	tttattgataattatagatgttaataagcatatcttgaatgaa	gcgaaacacctgaaaaaatcaaaattctgcgaaaattgaaaatgcattaaaatac 	ttttgcatttttctacatcacatgaatgtagaaattaaaagggaaatcaaatttct 	gaggatataattgaatgaaacattgcgaaattaaaatgtgcgaaacgtcaaaaaggg 	aattigggtatcaaaatcgatcctaaaaccaacactttcagcatccgccaactcttca
3181 3181 3241 3241 3301	3301 3361 3361	3421	3481	3541	3601	3661	3721	3781 3781	3841	3901	3961	4021	4081	4141	4201	4261
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Qy Oy	DP OY	Dp Oy	Db Qy	Db Qy	oy Oy	oy Oy	Oy Oy	DP Qy	DP Qy	do yo	g &	Dp Qy	Oy Oy	Qy Oy	QQ

4320	4380	4 4	450	450	4560	462	4 4	468	474	4	4 4	4860	49	-	498	4	Ω Ω	5100	10	-	5160	5220	7		28	5340	40	•
	cggatgctcttctcggatacagttcaagtcgt 	tgaagaggatatgaactttgtcg 	41 taagccgfgttttcgacgagaaaccatgtacagaaacttctcgagtcctcgfggaatg	41 TAAGCCGTGTTTTCGACGAGAAACCATGTACAGAAACTTCTCGAGTCCTCGTGGAATG	atgaacactttgagcagatgccaacacggaatgg 	61 acaaggacaatcttaccaatttgttcagatgcatgggctatacggttatt.	CARGGACAAICTTACCAATITGITCAGAIGCAIGGGCIATAGGGTATTGCAAGGAC totagaananaanantacnaasaatataatattacnaasaananaasattataa	621 ATCTGACGGAAGGGTACGGCGAAAT	681 ccgaaaatgtgcgcccggtctcgacacgacaatttgtgttaaatgcaaa.	CGAAAATGTGGCGCCCGGTCTCGACACGACAATTTGTGTTAAATGCAAAATGTATAA	aattttgaacttccgcgaaaatgatttacctagt 	cattatgtgtttttttttatatttttcta 	accgtttgtaaattttcagacaattttccgcatacaaaacttgatagca	ccentigtaaattitcagacaattitccgcatacaaaactigatagcacgaaatcaat	921 ttctgaattttcaaaattatccaa	tctgaattttcaaaattatccaaaaatgcacaatttaaaatttgtaaaatttggcaaa	1981 ggtgtttcaatatgaaatgtatttttaaaaactttaaaaaccactccggaaagcaataa 	. Loaaaacaaogtcacaattcaaaagttattcatcogatttgttttt		01 caaaatttgaaaaaatcatgaaggatttagaaaagttt 	AAAATTTGAAAAATCATGAAGGATTTAGAAAAGTTTTATAACATTTTTTTGTAGATTT	caaatcgagaaaaagagaat 	CAAAATTTTTTTAACAAATCGAGAAAAGAGAATGAAAAATCGATTTTAAAAATATC	221 acagcttcgagagtttgaaattacagtactccttaaaggcgcacac	221 ACAGCTTCGAGAGTTTGAAATTACAGTACTCCTTAAAGGCGCACACCCCATTTGCATTG	1 accaaaaatttgtcgtgtcgagaccaggtaccgtagtttttgtc	201 ACCARAMANITES COLOS GENERAL CAROLACOS AGESTES ES ESCACARAMANITES (ACACARAMANITES ACCARAMANITES A	
0y 4	Dp 4	Db 4	Db 4	0y 4	Db 4	•	0 40 1 40	,	•	Qy 4	Db 4	Oy 4	Db 4	Qy 4	•	Qy 4	Db 4	Db 5	Qy 5	d d	Οy	qq	οy	QQ G			, d	

\$40 articasaaasaagtgaatticgattittittitigiiiiiiiiiiiiiii
4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4

aatatttgaaacagatgcca 	racititacctaltatearidatit ttgaaatagtcactatttatcgggtt 	agcgaaattacatcaaccatcaa 68	TCCGCCTCTTTTCTGTGCGGCTT 596 ILLAaattaaattcagatgacatc 702 TTAAATTAAATTTCAGATGACATC 702 Sacgaaactctgcogtctaaaatc 708 TIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	agttctctttcgt	actcgttttgaatttgattgttgttgt 7320	tttgaattaacgaatagcattcccatc 750
cttgtggatttcagacatcacagggat 	TTCCAAGCCTGCCGCGTCAACCTACAA aatattttatgctaatttttttgggttaa 		ACGGTTGGCGCGCGCAAGTTTGCAAAA maacaaggatcggtttagattttccc	aattgataattgt 	261 gtttgtgtctcgaacgcataataatttaataa [1 ttaacctatttttcgccacaaaaatctaa
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Oy 6 Oy 6 Oy 6 Oy 6		0	0	0y 7 0y 7 0y 7 0y 7 0y 7 0y 7 0y 7 0y 7	Db 77 QY 77 QD 77

Mon Aug

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1464 agatgacatcccgcctgctcaaaaagttctacttttggccggaagcacgaaactctgccg 1523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7011 AGATGACATCCCGCCTGCTCAAAAGTTCTACTTTTGGCCGGAAGCACGAAACTCTGCCG 7070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1524 tctaaaaattcactcgtgattcattgcccaattgataattgtctgtatcttctcccccagt 1583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1584 tototttogoccaattagtttaaaaccatgtgtatattgttatcotatactcatttcact 1643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7131 TCTCTTTCGCCCAATTAGTTTAAAACCATGTGTATATTGTTATCCTATACTCATTTCACT 7190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           aaattatgacgtttgtgtctcgaacgcataatatttaataactcgttttgaatttgat 1763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7251 AAATTATGACGTTTGTGTCTCGAACGCATAATAATTTTAATAACTCGTTTTGAATTTGAT 7310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tagttgttgttgtgccagtatatatgtatgtactatgcttctatcaacaaatagtttcata 1823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7311 TAGTIGITGICCCAGIATAIAIGIAIGIACTAIGCIICIAICAACAAAAIAGIITCAIA 7370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 1: Fig 2C; 116pp; English.

079970 encodes R66770 interleukin-1 beta converting enzyme homolog ced3, increasing ced3s enzymatic activity can promote the programmed cell death of cancer cells (pref. those overexpressing the bel-2 oncogene), this can be used as the basis of a new cancer treatment. Alternatively by reducing ced3s enzymatic activity programmed cell death can be inhibited, this may be useful in the development of new cell lines which remain viable in culture for extended or indefinite periods, independant of growth factors. Sequence 2485 BP; 684 A; 564 C; 480 G; 757 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             comoting or preventing programmed cell death in vertebrate cells by inhibiting the activity of interleukin-1 beta converting
                                                                                                                                                                                                                      Interleukin-1 beta convering enzyme homolog ced3 cDNA.
Interleukin-1 beta converitng enzyme; homolog ced3;
oncogene bcl-2; programmed cell death; cancer treatment; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 2485;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ch 6.6%; Score 505; DB 14;
I Similarity 100.0%; Pred. No. 0.00e+00;
505; Conservative 0; Mismatches 0;
                                                                                      7621 CCGTGATATCCCGATTCTGGTCAGCAAAGATCT 7653
                                                                   7621 ccgtgatatcccgattctggtcagcaaagatct 7653
                                                                                                                                                                                                                                                                                        Location/Qualifiers
17..1528
                                                                                                                                                      r 14
Q79970 standard; cDNA; 2485
                                                                                                                                                                                                                                                                                                                                                         05-JAN-1995.
10-JUN-1994; U06630.
24-JUN-1993; US-080850.
(GEHO ) GEN HOSPITAL CORP.
                                                                                                                                                                                                    13-SEP-1995 (first entry)
                                                                                                                                                                                                                                                                                                                           /*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Promoting or preventing
                                                                                                                                                                                                                                                                        Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 95-051742/07.
                                                                                                                                                                                                                                                                                                                                                                                                                              Yuan J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                P-PSDB; R66770.
                                                                                                                                                                                                                                                                                                                                           WO9500160-A.
                                                                                                                                                                                                                                                                                                                                                                                                                              Miura M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local
                                                                                                                                                                                      079970;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     enzyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
 g
                                                                                                                                                                        ŏ
                                                                 g
                                                                                                     ò
```

```
Taenorhabbitis elegans cell death-protective gene - used to develop agents for preventing cell death or for reducing develop agents for preventing cell death or for reducing population of cells

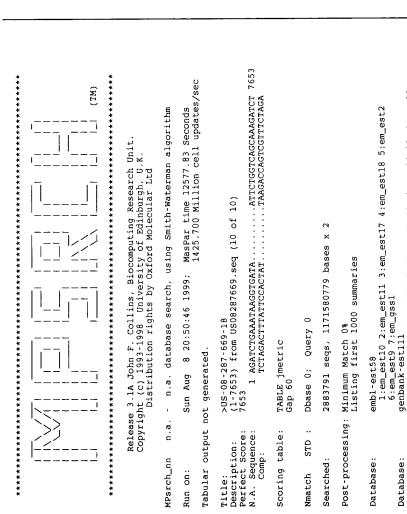
Claim 3: Page 54-58; 112pp; English.

Claim 3: Page 54-58; 112pp; English.

Ced-9 is essential for C. elegans development and apparently cuctions by protecting cells during development from programmed cell death.

Ced-9 was shown to function by antagonising the activities of cell death genes ced-3 and ced-4. The protein product cell the ced-9 protein. The ced-9 gene can be used for developing activities for treating a condition characterised by increased cell death cuch as myocardial infarction, stroke, traumatic brain injury, neurodegenerative disease, muscular degenerative disease, muscular degenerative disease, ageing, hypoxia, ischaemia, toxaemia, infection or hair loss. It can also be used for reducing a population of cells in the treatment of the contraction of the ced-protein or the treatment of the contraction of cells in the treatment of the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the ced-protein or the 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
1884 togattaattttaacctattttttcgccacaaaaaatctaatatttgaattaacgaatag 1943
                                 Cell death; senescence; programmed cell death; ced-9; myocardial infarction; stroke; brain injury; neurodegenerative disease; muscular degenerative disease; ageing; hypoxia; ischaemia; toxaemia; infection; hair loss; neoplasia; cancer; ced-3; ced-4; bcl-2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               neoplastic growth cancerous tissue, infected cells or autoreactive immune cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 0.5%; Score 39; DB 9; Length 6560; Best Local Similarity 100.0%; Pred. No. 1.18e-13; Matches 39; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1203 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3249 catttaaagaattactgtagttttcgctacgagatattt 3287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1274 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-DEC-1993, U05651, 14-JUN-1993; U05651, 12-JUN-1992; US-888933, 10-AGC-1992, US-927681, (MASI ) MASSACHUSETTS INST TECHNOLOGY. Hengartner M, Horvitz HR; WPI; 94-007540/01.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Search completed: Mon Aug 9 00:52:07 1999 Job time : 1704 secs.
                                                                                                                                                                                                                                                                                                                                                                                           23-JUN-1994 (first entry)
Genomic region containing ced-9 gene.
                                                                                                                                                                                             7491 CATICCCAICICICCCGIGCGGAA 7515
                                                                                                                             1944 cattcccatctcccgtgccggaa 1968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2040 A;
                                                                                                                                                                                                                                                                                            T 15
O54629 standard; DNA; 6560 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         oncogene; ss.
Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6560 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO9325683-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                054629;
                                                                                                                             g
                                                                                                                                                                                                 ò
```

•				
				• •
				. •



Mean 10.997; Variance 1.798; scale 6.117 Statistics:

Database:

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Pred. No.	0.00e+00	0	-					٠.	٠.	6.31e-03
Description	C38304 Yuji Kohara unp	CELK105H1F Yuji Kohara	C39290 Yuji Kohara unp	C51090 Yuji Kohara unp	C29898 Yuji Kohara unp	CELK086DZR Yuji Kohara	wEST01956 Early embryo	C50455 Yuji Kohara unp	CELK098H4F Yuji Kohara	cSRL-131f8-u cSRL flow
ΩI	C38304	D75533	C39290	C51090	C29898	D64660	T01235	C50455	D75308	B01439
DB	15	32	15	15	15	32	œ	15	32	37
Length	300	360	360	377	300	337	359	360	360	99
Query Match	3.9	2.6	2.3	2.0	0.4	0.4	0.4	0.4	0.4	0.3
Score	299	198	177	153	29	53	31	28	27	21
Š. Š.	-	7	m	4	S	9	7	8	6	10
Resi	υ				υ	υ		υ	υ	υ
	Query Match Length DB ID	Ouery Score Match Length DB ID Description Pr 299 3.9 300 15 C38304 C38304 Yuji Kohara unp C	Query Score Match Length DB ID Description P. 299 3.9 300 15 C38304 C38304 Yuji Kohara unp 198 CELK105H1F Yuji Kohara unp 198 CELK105H1F Yuji Kohara unp 198	Score Match Length DB ID Description P. 299 3.9 300 15 C38304 C38304 Yuji Kohara unp 198 2.6 360 32 D75533 CELK105HIF Yuji Kohara 177 2.3 360 15 C39290 C39290 Yuji Kohara unp 177 2.3 360 15 C39290 C39290 Yuji Kohara unp	Ouery Score Match Length DB ID Description 299 3.9 300 15 C38304 C38304 Yuji Kohara unp 198 2.6 360 32 D75533 CELK105H1F Yuji Kohara 177 2.3 360 15 C39290 C39290 Yuji Kohara unp 153 2.0 377 15 C51090 C51090 Yuji Kohara	Ouery Score Match Length DB ID Description 299 3.9 300 15 C38304 C38304 xuji Kohara unp 198 2.6 360 32 D75533 CELK105H1F xuji Kohara unp 177 2.3 360 15 C33290 C39290 xuji Kohara unp 153 2.0 377 15 C51090 C51090 xuji Kohara unp 29 0.4 300 15 C28898 C29898 xuji Kohara unp	Ouery Score Match Length DB ID Description 299 3.9 300 15 C38304 C38304 Yuji Kohara unp 198 2.6 360 32 D75533 CELK105H1F Yuji Kohara 177 2.3 370 15 C31090 C39290 Yuji Kohara unp 153 2.0 377 15 C31090 C51090 Yuji Kohara unp 29 0.4 300 15 C29898 C29898 Yuji Kohara unp 29 0.4 373 2 D64660 CELK086D2R Yuji Kohara unp	Score Match Length DB ID Description Program (Control of Match Length DB ID Description 299 3.9 300 15 C38304 C38304 Yuji Kohara unp (C3920 C3920 C3920 Yuji Kohara unp (C3920 C3920 Yuji Kohara unp (C3920 C3920 Yuji Kohara unp (C3920 C3920 Yuji Kohara unp (C3920 C3920 Yuji Kohara unp (C3920 Yuji Kohara unp (C3920 Yuji Kohara unp (C3920 Yuji Kohara unp (C3920 Yuji Kohara unp (C3920 Yuji Kohara Unp (C3920 Yuji Kohara Unp (C3920 Yuji Kohara Unp (C3920 Yuji Kohara Unp (C3920 Yuji Kohara Unp (C3920 Yuji Kohara Unp (C3920 Yuji Kohara Unp (C3920 Yuji Kohara Unp (C3920 Yuji Kohara Unp (C3920 Yuji Kohara Unp (C3920 Yuji Kohara Unp (C3920 Yuji Kohara Unp (C3920 Yuji Kohara Unp (C3920 Yuji Kohara Unp (C3920 Yuji Kohara Unp (C3920 Yuji Yuji Kohara Unp (C3920 Yuji Yuji Yuji Yuji Yuji Yuji Yuji Yuji	Ouery Score Match Length DB ID Description 299 3.9 300 15 C38304 C38304 Yuji Kohara unp 198 2.6 360 32 D75533 CELKIO5HIF Yuji Kohara unp 157 2.3 360 15 C39290 C39290 Yuji Kohara unp 153 2.0 377 15 C51090 C51090 Yuji Kohara unp 29 0.4 300 15 C29898 C29898 Yuji Kohara unp 29 0.4 373 2 D64660 CELKO86EDER Yuji Kohara 31 0.4 359 8 T01235 WEST01956 Early embryo 28 0.4 360 15 C50455 C50455 Yuji Kohara unp	Ouery Score Match Length DB ID Description 299 3.9 300 15 C38304 C38304 Yuji Kohara unp 177 2.3 360 15 C38304 C51091 Kohara unp 153 2.0 377 15 C51090 C51090 Yuji Kohara unp 153 2.0 377 15 C51090 C51090 Yuji Kohara unp 29 0.4 300 15 C29898 C29898 Yuji Kohara unp 29 0.4 377 15 C51090 C51090 Yuji Kohara unp 29 0.4 377 15 C51090 C51090 Yuji Kohara unp 29 0.4 377 15 C51090 C51090 Yuji Kohara unp 29 0.4 360 15 C50455 C50455 Early embryo 27 0.4 360 32 D75308 CELK088H4F Yuji Kohara unp

6.318e-011 1.19e-011	.19e-0 .31e-0 .19e-0
131-A2-H07-MR.abilicil.rl Soares_Dibing 193.rl Soares_Dibing 193.rl Soares_Dibing 193.rl Soares_Dibing 193.rl Scares_Dibing 193.rl Scares_Dibing 193.rl Scares_Dibing 194.sl Scares in Ethiology 195.sl Scares in Ethiology 195.sl Soares in Ethiology 195.sl NOT_CGAP_Biblicity 195.sl NOT_CGAP_Giblicity 195.s	1 Soares m 1 Soares f 1-a-05-0-u 1 Soares i 288L16.TF
B36009 AA084532 AA210472 AA210472 AA210472 AA28895 AA28895 AA36895 AA36895 AA36895 AA36895 AA36895 BA0070877 AA1364052 BA00999 AA17621 B4805 AA17621 B4805 AA17621 B4806 AA27157 AA27157 AA27157 AA27157 AA27157 AA27157 AA27157 AA27157 AA27157 AA27157 AA27157 AA27157 AA27157 AA27157 AA27157 AA27157 AA2800099 AA892016 AA892016 AA692924 AA176999 AA18869 AA27159 AA18869 AA27159 AA176999 AA27159 AA176999 AA176999 AA176965 AA1766663 AA1766663 AA2715869 AA27159 AA27159 AA27159 AA27159 AA27159 AA27159 AA27159 AA27169 AA27159 AA27159 AA27169995 AA2716944 AA271596663 AA27169495 AA27169494	64 64 0727 061
EN 4E 2025 8 10 20 20 20 20 20 20 20 20 20 20 20 20 20	30 30 38 38
11111111111111111111111111111111111111	
	20 20 20 20 20
	881 83 83
	υ

οιοσοσ σ

	-::::::::::::::::::::::::::::::::::::::
RPCIII-68C13.TK RPCIII TENUOU22 T.CULI epima af33h12.S1 Scares_Lota 0134M3 gmbpfHB3.1, G. mg06b04.T1 Scares mous EST207964 Normalized r vol009.X1 Barstead mo vol009.X1 Barstead mo vol009.X1 Barstead mo vol009.X1 Barstead mo vol009.X1 Barstead mo vol009.X1 Barstead mo vol009.X1 Barstead mo vol009.X1 Barstead mo vol009.X1 Barstead mo vol009.X1 Barstead mo vol000.X1 Scares_preg HUMSUPV276 Human brain CIT-HSP-2168472.TF CIT ma69b08.X1 Scares_preg HUMSUPV276 Human brain CIT-HSP-214413.TF CIT CIT-HSP-2314J13.TF CIT CIT-HSP-2314J13.TF CIT CIT-HSP-2314J13.TF CIT CIT-HSP-2314J13.TF CIT CIT-HSP-2314J13.TF CIT CIT-HSP-2314J13.TF CIT CIT-HSP-2314J13.TF CIT CIT-HSP-2314J13.TF CIT CIT-HSP-2314J13.TF CIT CIT-HSP-2314J13.TF CIT CA1501 Yuji Kohara unp CELKIOCZF Yuji Kohara unp CELKIOCZF Yuji Kohara unp CELKIOCZF Yuji Kohara unp CELKIOCZF Yuji Kohara unp CELKIOCZF Yuji Kohara unp CELKIOCZF Yuji Kohara unp CELKIOCZF Yuji Kohara unp CELKIOLZY STATAGOR CELKIOLZY STATAGOR CELKIOLZY STATAGOR CELKIOLZY STATAGOR CELKIOLZY STATAGOR CELKIOLZY STATAGOR CELKIOLZY STATAGOR CELKIOLZY STATAGOR CELKIOLZY STATAGOR CELKIOLZY STATAGOR CELKIOLZY STATAGOR CELKIOLZY STATAGOR UN R-A0-bh-f-09-0-UI.S WEST00729 Early embryo HS_3241_B1_G07_MR CIT IISIC3 czapFPGD2.1, De Ve37607.Y1 Scares mous HS_3241_B1_G07_MR CIT IISIC3 czapFPGD2.1, De Ve37607.Y1 Scares mous HS_3241_B1_G07_MR CIT CITPI-EI-12529D12.TR CIT UND4404.T1 Scares mous RUTH LUD7NISP6 RPCI-1 LUD2A05.X1 NCI-GGAP_KI CIT-HSP-2357114.TR CIT-HSP-2357114.TR CIT-HSP-2357114.TR CIT-HSP-2357114.TR	U.T.F.E.I. tac04-0-UI.S vw27e09.I Soares mous yo40h06.rI Soares adul EST27173 Cerebellum II z104e10.sI Soares_preg HS_3230_BI_E11_MR_CIT nn41b09.sI NCI_CGAP_GC AU018402 Mouse eight-c
AQ256693 AA772976 AA772976 AA772976 AA772976 AA772976 AA772976 AA772908 AA742908 AA742908 AA742908 AA742908 AA742908 AA742908 AA742908 AA742908 AA742908 AA742908 AA7508 AA7689 AA7469 AA7469 AA7469 AA77613	
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	380 23 381 18 382 31 382 11 383 36 383 39 384 22
	000000110
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
6.316-03 6.316-03 6.316-03 6.316-03 6.316-03 6.316-03 6.316-03 6.316-03 6.316-03 6.316-03 6.316-03 6.316-03 7.196-01 1.196-01	1 1000010
Normalized inforcapper Capper Data normalized in 19 122 hormalized in 19 122 hormalized in 19 122 hormalized in 19 122 hormalized in 19 122 hormalized in 19 122 hormalized in 19 122 hormalized in 19 122 hormalized in 19 122 hormalized in 19 19 19 19 19 19 19 19 19 19 19 19 19	1 100 00 10 1 1 1
NIBI146 Normalized inf 2160C3 caapPFD042.1, De 148C2LB12 normalized in 15.2166.A2.409.MR CIT wm60907.rl Stratagene 45.2266.A2.407.MF CIT HSC2LB12 normalized i 45.2266.A2.407.MF CIT HSC2LB12 normalized i 45.2210463 Adipose tissu to10402.xl NCI_CGAP_UU UI-RFCANGNS9 Leishmania UI-RFCANGNS9 Leishmania UI-RFCANGNS9 Leishmania UI-RFCANGNS9 Leishmania UI-RFCANGNS9 Leishmania UI-RFCANGNS9 Leishmania UI-RFCANGNS9 Leishmania UI-RFCANGNS9 Leishmania UI-RFCANGNS9 Leishmania UI-RFCANGNS9 Leishmania UI-RFCANGNS9 Leishmania UI-RFCANGNS9 Leishman UI-RFCANGNS9 Leishman UI-RFCANGNS9 Leishman UI-RFCANGNS9 Leishman UI-RFCANGNS9 Leishman UI-RFCANGNS9 Leishman UI-RFCANGNS NUI KOhara unp C34031 VUJI KOhara unp C37064 VUJI KOhara unp C37064 VUJI KOhara unp C37064 VUJI KOhara unp C37064 VUJI KOhara unp C37064 VUJI KOhara unp C37064 VUJI KOhara unp C37064 VUJI KOhara unp UI-RFCANGNS NUI KOHARA UND UI-RFCANGNS NUI KOHARA UND UI-RFCANGNS NUI KOHARA UND UI-RFCANGNS NUI KOHARA UND UI-RFCANGNS NUI KOHARA UND UI-RFCANGNS NUI KOHARA UND UI-RFCANGNS NUI KANGNS NU	Vidaturipes Ses sequiribles Ses sequiribles SET182536 Jurkat T-cel 2 Ww44hll.sl Soares mous 2 za96bl0 sl Soares feta 6 RPCIII-20Al6.TV RPCIII mulffil.rl Soares 2NbM lys65hl0.sl Soares reti 1
NIBI146 Normalized inf 2160C3 czapPFDd2.1, De HSC2LB12 normalized in HSC2LB12 normalized in HSC2LB12 normalized in HSC2LB12 normalized in HSC2LB12 normalized in HSC2LB12 normalized in HSC2LB12 normalized in HSC2LB12 normalized in HSC2LB12 normalized in HSC2LB12 normalized in HSC2LB12 normalized in Unre-Co-me-e-10.0-10.1 no. 10.00 pc. 20.00 pc.	11 AA311800 EST182536 Jurkat T-cel 2 12 AA312800 EST182536 Jurkat T-cel 2 13 AA559845 vw54hll.s. Soares mous 2 13 N75835 za96bl0.s1 Soares_feta 6 18 B85569 RPCIII-20A16.TV RPCIII 1 19 AA200899 mulffil.rl Soares zNbM 1 13 H80030 ys65hl0.s1 Soares reti 1
## T16338 NTB1146 Normalized inf 33 N98071 19 F04162 ## A009753 HS_2186_A2_B07_ME CIT 18 A0070538 HS_2286_A2_B07_ME CIT 18 A0070538 HS_2286_A2_B07_ME CIT 18 A0070538 HS_2286_A2_B07_ME CIT 18 A0070538 HS_2286_A2_B07_ME CIT 18 A0070538 HS_2286_A2_B07_ME CIT 18 A0070548 HS_2286_A2_B07_ME CIT 18 A0070548 HS_2286_A2_B07_ME CIT 18 A0070548 HS_2286_A2_B07_ME CIT 18 A0070548 HS_2286_A2_B07_ME CIT 18 A0070548 HS_2286_A2_B07_ME CIT 18 A0070548 HS_2286_A2_B07_ME CIT 18 A0070548 HS_2286_A2_B07_ME CIT 18 A0070548 HS_2286_A2_B07_ME CIT 18 A007054 HS_2286_A2_B07_ME CIT 18 A007054 HS_2286_A2_B07_ME CIT 18 A007054 HS_2286_A2_B07_ME CIT 18 A007054 HS_2286_A2_B07_ME CIT 18 A007054 HS_2286_A2_B07_ME CIT 18 A007055 HS_2286_A2_B07_ME CIT 18 A007057 HS_2286_A2_B07_ME CIT 18 A007057 HS_2286_A2_B07_ME CIT 18 A007057 HS_2286_A2_B07_ME CIT 18 A007057 HS_208_A2_B07_ME CIT 18 A007057 HS_208_A2_B07_ME CIT 18 A007057 HS_208_A2_B07_ME CIT 18 A007057 HS_208_A2_B07_ME CIT 18 A007057 HS_208_A2_B07_ME CIT 18 A007057 HS_208_A2_B07_ME CIT 18 A007057 HS_208_A2_B07_ME CIT 18 A007057 HS_208_A2_B07_ME CIT 18 A007057 HS_208_A2_B07_ME CIT 18 A007057 HS_208_A2_B07_ME CIT 18 A007057 HS_208_A2_B07_ME CIT 18 A007057 HS_208_A2_B07_ME CIT 18 A007057 HS_208_A2_B07_ME CIT 18 A007057 HS_208_A2_B07_ME CIT 18 A007057 HS_208_A2_B07_ME CIT 18 A007057 HS_208_A2_B07_ME CIT 18 A007057 HS_208_A2_B07_B07_B07_B07_B07_B07_B07_B07_B07_B07	3 342 30 401895 7132f09.s1 Soares plac 1 342 31 AA311800 EST182536 Jurkat T-cel 2 3 345 31 AA31800 EST182536 Jurkat T-cel 2 3 345 31 AA52845 2 4045411.s1 Soares mous 2 3 345 38 B85569 RPCIII-20A16.TV RPCIII 1 3 345 32 4800399 mulffil.r1 Soares 2NbM 1 3 345 32 480030 ys65h10.s1 Soares reti 1
281 8 T16338 NIBBI146 Normalized inf 18 281 3 N89071 S10075 CappFDd21, De 18 281 3 N99071 S10075 CappFDd21, De 18 281 3 N99071 S10075 CappFDd21, De 18 281 3 N99071 S10077 INCITEATGONE CIT 18 286 18 A009755 Number of 19 72 Normalized in 286 18 A009755 Number of 19 72 Normalized in 286 18 A009775 ESTIDAGON INCITEATGONE CIT 18 290 24 AA689071 INFTAGONE LISSUE CIT 29 27 AA999318 UNFF.C.T. Normalized in 28 29 27 AA999318 UNFF.C.T. Normalized in 29 27 AA999318 VST 2000. S1 Scarce reti 18 29 27 AA999318 VST 2000. S1 Scarce reti 19 7 Frontier of 28 29 27 AA999318 VST 2000. S1 Scarce reti 19 29 27 AA999318 VST 2000. S1 Scarce reti 19 29 20 24 AA99725 Capper of 22 89 20 20 20 20 20 20 20 20 20 20 20 20 20	0.3 342 30 H01895 y132f09.s1 Soares plac 1 0.3 342 11 AA311800 ET182536 Jurkat T-cel 2 0.3 345 31 AA311800 ET182536 Jurkat T-cel 2 0.3 345 33 N75835 za96b10.s1 Soares_feta 0.3 345 38 B85569 RPCIII-20A16.TV RPCIII 0.3 345 32 H80030 y165h10.s1 Soares zNbM 1 0.3 345 32 H80030 y165h10.s1 Soares zNbM 1 0.3 345 32 H80030 y165h10.s1 Soares reti 1

0 0 00 000 00

0 000000 _ .

0 0000

	11.19
aq91c10.x1 Stanley Fro yi93q03.s1 Soares plac zu06f01.n1 Soares_test CIT-HSP-2045111.T og89a03.s1 CITB1-211.T Soares_test CITB1-E1-2560B16.TR CI ud75905.x1 NCL_CGAP_K1 CITB1-E1-2560B16.TR CI ud75905.x1 Soares mela 68443 Mouse fertilize AU03802 Dictyostelium mu33d02.r1 Soares_plac Zd40g02.r1 Soares_plac Zd40g02.r1 Soares_plac Zd40g02.r1 Soares_plac Zd40g02.r1 Soares_plac Zd40g02.r1 Soares_plac Zd40g02.r1 Soares_plac Zd40g02.r1 Soares_plac Zd40g02.r1 Soares_plac Zd40g02.r1 Soares_plac Zd40g02.r1 Soares_plac Zd40g02.r1 Soares_plac Frubripes GSS sequenc CIT-HSP-2304A5.TF CIT- C24688 Dictyostelium AP PRC111-13D2.TV RPC111 C17-HSP-2104A5.TP CIT- C24688 Dictyostelium CIT- C24600.r1 Scares mous C1T-HSP-213-A2- C10-0-00-01.s C1T- C1T-HSP-213-A2- C10-0-00-01.s C1T- C1T-HSP-213-A2- C10-0-00-01.s C1T- C1T-HSP-213-A2- C10-00-01.s C1T- C1T-HSP-213-A2- C10-00-00-01.s C1T- C1T-HSP-213-A2- C10-00-00-01.s C1T- C1T-HSP-213-A2- C10-00-00-01.s C1T- C1T-HSP-213-A2- C10-00-00-01.s C1T- C1T-HSP-213-A2- C10-00-00-01.s C1T- C1T-HSP-213-A2- C10-00-00-01.s C1T- C1T-HSP-213-A2- C10-00-00-01.s C1T- C1T-HSP-213-A2- C10-00-00-01.s C1T- C1T- C1T- C1T- C1T- C1T- C1T- C1T-	CIT-HSP-2172D12.TR CIT fb34910.x1 Zebrafish W CIT-HSP-212N21.TR CIT oe60912.s1 NCI_CGAP_LU CIT-HSP-202805.TP CIT- RPCI11-9547.TJ RPCI11 RPCI11-96110.TJ RPCI11 HL01331.5prime HL Dros yx12f10.s1 Soares mela HS-1050-B2-E03-MR.abi CIT-HSP-233703.TR CIT-
A A1267578 3 AA26568 2 AA865686 2 AA865636 2 AA865636 2 AA865636 3 AA182918 8 AA8620384 2 AA003881 2 AA203882 3 N26644 2 AA13289 4 AA602929 4 AA13289 4 AA602929 7 FR0013289 7 FR0013289 7 FR0013289 7 AA62938 7 AA62938 7 AA62938 7 AA62938 7 AA62939 7 AA62938 7 AA62938 7 AA62938 7 AA62938 7 AA62938 7 AA62938 7 AA62938 7 AA62938 7 AA62938 7 AA62938 8 AA636810 7 AA62938 7 AA62938 7 AA62938 8 AA636810 7 AA62938 8 AA6836810 8 AA524189 8 AA680577 7 AA66933 8 A1554137 8 AA6363610 8 AA524135 8 AA66933 8 A1554137 8 AA66933 8 A1564135 8 AA6819768 8 AA6819768 8 AA6819768 8 AA6819768 8 AA6819768 8 AA6819768 8 AA6819768 8 AA6819768 8 AA6819768 8 AA6819768 8 AA6819768 8 AA6819768 8 AA6819779 8 AA128993	
\$2.000 \$2	00000000000000000000000000000000000000
0000 00 00 00 00 00 00 00 00 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
11.139e-011.11.199e-011.199e-011.11.199e-011.11.199e-011.11.199e-011.11.199e-011.11.199e-011.11.199e-011.11.199e-011.11.199e-011.11.199e-011.11.199e-011.199e-011.11.199e-011.11.199e-011.11.199e-011.11.199e-011.11.199e-011.11.199e-011.11.199e-011.11.199e-011.199	
Mus musculus clone OST 11.9 H_2182_A2_C10_MT CIT CITHS_E1_2572017_HT CIT CITHS_E1_2572017_HT CIT CITHS_E1_2572017_HT CIT Ud36910.r1 Soares mous G3391.s1 NCI_CGAP_Bt 6.31 RS_216_A2_BOS_MT CIT RS_216_A2_GCS_MT CIT RS_216_A2_GCS_MT CIT HS_216_A2_GCS_MT CIT HS_216_A2_GCS_MT CIT HS_216_A2_GCS_MT CIT HS_216_A2_GCS_MT CIT HS_216_B2_CII_SPEE RP 11.9 MWJ4611.r1 Soares Town HS_216_B2_CII_SPEE RP 11.9 MWJ4611.r1 Soares Town HS_216_B2_CIO_MT CIT HS_216_B1_D12_MT CIT RCIII.124CII.JT RRCII 11.9 RCIII.124CII.JT RRCII 11.9 RCIII.124CII.JT RRCII 11.9 RCIII.S Soares_feta 11.9 RCIII.S Soares_feta 11.9 RCIII.S Soares_feta 11.9 RCIII.S Soares_feta 11.9 RCIII.S Soares_feta 11.9 RCIII.S Soares_feta 11.9 RCIII.S Soares_feta 11.9 RCIII.S Soares_feta 11.9 RCIII.S Soares_feta 11.9 RCIII.S Soares_feta 11.9 RCIII.S Soares Town HS_210_B1_CI Soares_feta 11.9 RCIII.S Soares Town HS_210_B1_CI Soares Town HS_210_B1_CI Soares_feta 11.9 RCIII.S Soares Town HS_210_B1_CI Soar	VV69412.1.3 Stratagene 1.19 T22P5-77 TAMU Arabidop 1.17 MEST0-D5.TW1412.Seq IS 1.19 fa08a06.s1 Zebrafish I 1.19 U.R-C2pont-d-08 0-UI. 6.31 Vy60g04.r1 Soares_mult 1.19 m093905.r1 Soares mous 6.31 ub54e02.r1 Soares mous 6.31 ub54e02.r1 Soares mous 6.11 m47h03.r1 Barstead mo 1.19 RY2004_B2_E05_T7 CIT 1.19 RPCIII-13K1.TV RPCIII 1.19
AF046559 Mus musculus clone OST 119 A0004535 HS_2182_A2_C10_MF CIT 119 A0142286 G1916_E1_2720D1_TF CI 511 A0144286 G1916_S.X1 NCI_CGAP_EN 119 AA2465855 G023311.51 NCI_CGAP_EN 119 BA2266148 Zq53311.51 NCI_CGAP_EN 119 AA266148 Zq53404.71 Stratagene 118 BR2186 A103312 HS_213_B2_L11_SP6E_RP 119 AA2124296 HS_213_B2_L11_SP6E_RP 119 AA2124337 HS_213_B2_L11_SP6E_RP 119 AA2124337 HS_213_B2_L11_SP6E_RP 119 AA2124555 Multall.11 Soares Zuby 119 AA246699 TC_TTALATAGENE CIT 6.31 AA26655 Multall.212_A2_B06_MF CIT 119 AA26655 Multall.212_A2_B06_MF CIT 119 AA246699 TC_TTALATAGENE CIT 6.31 AA26659 MULTALATAGENE CIT 6.31 AA26659 MULTALATAGENE CIT 6.31 AA26659 MULTALATAGENE CIT 6.31 AA26659 MULTALATAGENE CIT 6.31 AA26659 MULTALATAGENE CIT 6.31 AA26659 MULTALATAGENE CIT 6.31 AA26659 MULTALATAGENE CIT 6.31 AA26659 MULTALATAGENE CIT 6.31 AA26659 MULTALATAGENE CIT 6.31 AA26659 MULTALATAGENE CIT 6.31 AA26659 MULTALATAGENE CIT 6.31 AA26659 MULTALATAGENE CIT 6.31 AA36650 MULTALATAGENE CIT 6.31 AA36650 MULTALATAGENE CIT 6.31 AA36651 Und5310_TI SCAFE_COT 6.31 AA36621 Und5310_TI SCAFE_COT 6.31 AA36621 Und5310_TI SCAFE_COT 6.31 AA36621 Und460_TI SCAFE_COT 6.31 AA36621 Und460_TI SCAFE_COT 6.31 AA36621 Und460_TI SCAFE_COT 6.31 AA36621 Und460_TI SCAFE_COT 6.31 AA36621 Und460_TI SCAFE_COT 6.31 AA31651 MCTT 6.31 AA31650 MCTT 6.31 AA31650 MCTT 6.31 AA31650 MCTT 6.31 AA31650 MCTT 6.31 AA31650 MCTT 6.31 AA31650 MCTT 6.31 AA31650 MCTT 6.31 AA31650 MCTT 6.31 AA31650 MCTT 6.31 AA31650 MCTT 6.31 AA31650 MCTT 6.31 AA31650 MCTT 6.31 AA31650 MCTT 6.31 AA31650 MCTT 6.31 AA31650 MC	18 AA/0009/ VV69412.T1 Stratagene 1.19 40 AQ249250 T22P5-T7 TAMU Arabidop 1.17 21 AA979794 MEST0-D5.TW1412.Seq IS 1.19 23 A1113255 U1-R-C2P-nt-d-08-0-UI. 6.31 34 W61462 md93905.r1 Soares mult 1.19 22 A1046734 ub54e02.r1 Soares mous 6.31 10 AA222381 my17h03.r1 Barstead mo 1.19 37 AQ221444 HS_2004_B2_E05_T7 CTT 1.19 37 B71933 RPCIII-13KI.TV RPCIII 1.19
## APO46559 Mus musculus clone OST 1.19 ## AQ024535 HS_218_AC_10_MF CIT 1.19 ## AQ024535 HS_218_AC_10_MF CIT 1.19 ## AQ024545 HS_218_AC_10_MF CIT 1.19 ## AQ01727	423 18 AA/6009/ VV69012.T1 Stratagene 1.19 424 20 AQ249250 T22P5-T7 TAMU Arabidop 1.17 424 21 AA979994 MEST0-D5.TWA1412.Seq IS 1.19 425 14 AA542570 fa08a06.s1 Zebrafish I 1.19 426 23 A1113255 UI-R-C2p-nt.d-08.0-UI. 6.31 426 34 W61462 md93q05.r1 Soarcs_mult 1.19 426 22 A1046734 uh54e02.r1 Soarcs mous 6.31 427 10 AA22281 my17h03.r1 Barstead mo 1.19 43 430 39 AQ221444 HS_2004_B2_E05_T7 CIT 1.19 43 430 37 B71933 RPCI11-13K1.TV RPCI11
385 39 AF046559 Mus musculus clone OST 1.19 386 42 A0226805 FFS.218.2A.2C.1CM.FC.TT 1.19 386 42 A0226805 FFS.218.2A.2C.1CM.FC.TT 1.19 386 42 A0226805 FFS.218.2A.2C.1CM.FC.TT 1.19 389 23 A1154729 Udd6401.1 Stratagene 6.33 391 8 AA206147 FFS.215.2A.24.3G.FC.TT 1.19 392 18 BA20845 FFS.218.2A.2G.G.FC.TT 1.19 393 22 A1041473 FFS.215.2A.2G.FC.TT 1.19 395 19 T09983 FFS.218.2B.2C.1C.2A.FC.TT 1.19 395 19 T09983 FFS.218.2B.2C.1C.2A.FC.TT 1.19 395 19 A013969 FFS.218.2B.2C.1C.2A.FC.TT 1.19 395 27 A1444431 FFS.218.2B.2C.1C.2A.FC.TT 1.19 395 27 A1444431 FFS.218.2B.2C.1C.2A.FC.TT 1.19 396 39 A0128078 FFS.218.2B.2C.1C.2A.FC.TT 1.19 397 10 AA26655 FFS.225.2A.2B.2C.C.D.A.FC.TT 1.19 398 39 A0128078 FFS.218.2B.2C.1C.2A.FC.TT 1.19 399 39 A010857 FFS.225.2A.2B.2C.C.D.A.FC.TT 1.19 399 39 A010857 FFS.225.2A.2B.2C.C.D.A.FC.TT 1.19 399 39 A010857 FFS.225.2A.2B.2C.C.D.A.FC.TT 1.19 399 39 A010857 FFS.225.2A.2B.2C.C.D.A.FC.TT 1.19 399 39 A010857 FFS.225.2A.2B.C.A.FC.TT 1.19 399 39 A010857 FFS.225.2A.2B.C.C.T.FC.TT 1.19 399 39 A010857 FFS.225.2A.2B.C.C.T.FC.TT 1.19 390 39 A010857 FFS.225.2A.2B.C.C.T.FC.TT 1.19 390 39 A010857 FFS.225.2A.2B.C.C.T.FC.TT 1.19 390 39 A010857 FFS.225.2A.2B.C.C.T.FC.TT 1.19 390 39 A010859 FFS.225.2A.2B.C.C.T.FC.TT 1.19 390 39 A010859 FFS.225.2A.2B.C.C.T.FC.TT 1.19 390 39 A010859 FFS.225.2A.2B.C.C.T.FC.TT 1.19 390 39 A010859 FFS.225.A.C.FC.TT 1.19 390 39 A010859 FFS.225.A.C.FC.TT 1.19 390 39 A010859 FFS.225.A.C.FC.TT 1.19 390 39 A010859 FFS.225.A.C.FC.TT 1.19 390 39 A010859 FFS.225.A.C.FC.TT 1.19 390 39 A010859 FFS.225.A.C.FC.TT 1.19 390 39 A010859 FFS.225.A.C.FC.TT 1.19 390 39 A010859 FFS.225.A.C.FC.TT 1.19 390 39 A010859 FFS.225.A.C.FC.TT 1.19 390 39 A010859 FFS.225.A.C.FC.TT 1.19 390 39 A010859 FFS.225.A.C.FC.TT 1.19 390 39 A010859 FFS.225.A.C.FC.TT 1.19 390 39 A010859 FFS.225.A.C.FC.TT 1.19 390 39 A010859 FFS.225.A.C.FC.TT 1.19 390 39 A010859 FFS.225.A.C.FC.TT 1.19 39 A010859 FFS.225.A.C.FC.TT 1.19 39 A010859 FFS.225.A.C.FC.TT 1.19 39 A01085 FFS.225.A.C.FC.TT 1.19 39 A01085 FFS.225.A.C.FC.TT 1.19 39 A01085 FFS.	0.3 424 18 AA/6009/ VV69012.T1 Stratagene 1.19 0.3 424 40 AQ24250 T22P5-T7 TAMU Arabidop 1.17 0.3 424 40 AAG4250 T22P5-T7 TAMU Arabidop 1.17 0.3 425 14 AA542570 fa08a06.51 Zebrafish I 1.19 0.3 425 23 AN112855 UI-R-C2p-Tt-d-08-0-UI. 6.31 0.3 426 34 W61462 M693005.r1 Soarcs_mult 1.19 0.3 426 22 AIO44734 Uh54e02.r1 Soarcs mous 6.31 0.3 427 10 AA222381 M917N03.r1 Barstead mo 1.19 0.3 430 39 AQ221444 HS_2004_B2_E05_T7 CTT 1.19 0.3 430 37 B71933 RPCIII-13KI.TV RPCIII 1.19

11.13.3.3.3.3.3.3.3.3.3.3.3.3.3.3.3.3.3	6.31e-0 6.31e-0 6.31e-0 6.31e-0 6.31e-0
HE 3128 A1_C03_MR CIT RPCIII-120K15_TV RPCII 342H20.TV CTT9788KA1 H YM05h10.r1 Soares infa HE5.061_A1_C01_TA RPC CIT_HSP_257B9.TR CIT_ t153e03.x1 NCI_CGAP_Lu t153e03.x1 NCI_CGAP_Lu t153e03.x1 NCI_CGAP_Lu t153e03.x1 NCI_CGAP_Lu t153e03.x1 NCI_CGAP_Lu t153e03.x1 NCI_CGAP_Lu t153e03.x1 NCI_CGAP_Lu t153e03.x1 NCI_CGAP_Lu t153e03.x1 NCI_CGAP_Lu t153e03.x1 NCI_CGAP_Lu t153e03.x1 NCI_CGAP_Ru t16400.r1 Soares mous RE5.3171_A11_TT CIT RS_3128_A2_H01_T7 CIT RS_3128_A2_H01_T7 CIT RS_3128_A2_H01_T7 CIT RS_3128_A2_H01_T7 CIT CITB_EB_1 Soares mous RCIII-19299.TJ RPCIII VI9603.TJ SUGNOS SIXCEN CITB_EB_1-2559M1.TF CIT LD23842.39rim_L LD Dros RPCIII-14603.TJ RPCIII VI9603.TJ Soares infa XWMFCA938SK Brugia mal YM34a09.TJ Soares infa RS_316_B2_H05_T7 CIT CITB_EB_1-2559M1.TF CIT LD23842.39rim_L LD Dros RPCIII-14603.TJ RPCIII NCJ SOARES SOARE CITB_EB_1-2559M1.TF CIT LD23842.39rim_L LD Dros RPCIII-14603.TJ RPCIII NCJ SOARES SOARE CITB_EB_1-2559M1.TF CIT LD23842.39rim_L LD LOU CIT-HSP-343E2.TVD CIT UI-R-A1-BC-02-0-0-UI-S CIT-HSP-343E2.TVD CIT UI-R-A1-BC-02-0-UI-S CIT-HSP-343E2.TVD CIT UI-R-A1-BC-02-0-UI-S CIT-HSP-343E2.TVD CIT UI-R-A1-BC-02-0-UI-S	Adding the property of the pro
400 AQ140777 AQ1777 AQ177 AQ177 AQ177 AQ177 AQ177 AQ177 AQ177 AQ177 AQ177 AQ177 AQ177 AQ177 AQ177 AQ177 AQ177 AQ177 AQ177 AQ	AA862064 AA862064 AA929883 AA929883 AA929883 AA929883 AA943963 AQ413962 AU041175
44444444400000000000000000000000000000	
28811811811811811811811818888811188881118888	700110011000
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	513 514 514 515 517 6 518 520 520 521
G C	mous mous mela epim epim 2NbM sequ mous cit
59909.51 Knowles Stubbipes GSS sequences GSS sequences GSS sequences GSS sequences GSS sequences GSS sequences GSS sequences GSS sequences GSS sequences GSS Sequences GSS	35902.rl Soarces, 93003.rl Soarces, 93003.rl Soarces, 15004.rl Norl_COS, 93005.yl Soarces, 93006.rl Soarces, 53074_B2_B04_MF
MA14481 VCS9909.SI Knowles Sol KR0012376 (SD 52243_B2_A65_MR CUT (A220607) (SD 52243_B2_A65_MR CUT (A220607) (SD 52243_B2_A65_MR CUT (A220607) (SD 52243_B2_A65_MR CUT (A50619) (SD 52243_B2_A65_MR CUT (A50619) (SD 522411-130716_TJ RPCIII (A50619) (SD 522411-130716_TJ RPCIII (A50619) (SD 522777) (SD 522777) (SD 522777) (SD 522777) (SD 522777) (SD 522777) (SD 522777) (SD 522777) (SD 522777) (SD 522777) (SD 522777) (SD 522777) (SD 522777) (SD 522777) (SD 522777) (SD 522777) (SD 5227777) (SD 5227777) (SD 5227777) (SD 5227777) (SD 52277777) (SD 52277777) (SD 52277777) (SD 52277777) (SD 522777777) (SD 52277777777777777777777777777777777777	
465 13 AA414481 vC59909.SI Knowles Sc 466 40 AQ153647 F.rubipes GSS seques 467 38 AQ2200926 F.rubipes GSS seques 467 38 AQ2200926 F.rubipes GSS seques 469 27 AA403060 VIT-HSP-384022.TF CIT- 469 26 A1406989 MS66b10.x1 Stratagens 469 12 AA403060 VIT-HSP-1016.TJ Rep 469 12 AA403060 VIT-HSP-203A3.TV CIT- 469 12 AA403060 VIT-HSP-203A3.TV CIT- 469 12 AA403060 VIT-HSP-203A3.TV CIT- 470 13 AA11350 VIT-HSP-203A3.TV CIT- 471 14 A0310879 VIT-HSP-203A3.TV CIT- 472 14 AA12878 VIT-HSP-203A3.TV CIT- 473 28 A1306783 VIT-HSP-203A3.TV CIT- 474 10 AA21432 MP3483 VIT-HSP-203A3.TV CIT- 474 10 AA21432 MP3483 VIT-HSP-203A3.TV CIT- 474 10 AA21432 MP3483 VIT-HSP-203A3.TV CIT- 474 10 AA214432 MP3483 VIT-HSP-203A3.TV CIT- 474 10 AA214432 MP3483 VIT-HSP-203A3.TV CIT- 474 10 AA214432 MP3483 VIT-HSP-203A3.TV CIT- 474 10 AA214432 MP3483 VIT-HSP-203A3.TV CIT- 475 34 AA112878 VIT-HSP-203A3.TV CIT- 476 39 AA213406 VIT-HSP-203A3.TV CIT- 477 40 AA213406 VIT-HSP-203A3.TV CIT- 477 40 AA213406 VIT-HSP-203A3.TV CIT- 477 40 AA213406 VIT-HSP-203A3.TV CIT- 480 26 AA203406 VIT-HSP-203A3.TV CIT- 481 10 AA237819 VIT-HSP-203A3.TV CIT- 481 10 AA237819 VIT-HSP-203A3.TI SOATES MON- 482 20 AA0133703 VIT-HSP-2019M1.TR CIT- 484 38 AA0033406 VIT-HSP-2019M1.TR CIT- 484 38 AA0033406 VIT-HSP-2019M1.TR CIT- 484 38 AA003346 VIT-HSP-2019M1.TR CIT- 485 28 A165549 VIT-HSP-2019M1.TR CIT- 487 37 B45250 VIT-HSP-2019M1.TR CIT- 487 37 B45250 VIT-HSP-2019 VIT-HSP-2010M1. 487 37 A142546 MY3230 TI- 487 37 A142546 MY3230 TI- 487 37 A142546 MY3230 TI- 488 35 A012913 VIT-HSP-2010 NT- 489 36 A012913 VIT-HSP-2010 OUT- 489 36 A012913 VIT-HSP-2010 OUT- 489 36 A012913 VIT-HSP-2010 OUT- 489 36 A012913 VIT-HSP-2010 OUT- 489 37 A012546 MY3230 OUT-HSP-2010 OUT- 489 37 A012546 MY3230 OUT-HSP-2010 OUT- 489 37 A012546 MY3230 OUT-HSP-2010 OUT- 489 38 A012913 VIT-HSP-2010 OUT- 489 38 A012913 VIT-HSP-2010 OUT- 489 38 A012913 VIT-HSP-2010 OUT- 489 38 A012913 VIT-HSP-2010 OUT- 489 38 A012913 VIT-HSP-2010 OUT- 489 38 A012913 VIT-HSP-2010 OUT- 489 3	93 9 AAI86031 94 32 N39812 94 28 N362260 94 10 AA282955 94 28 AI510336 94 37 AR028840 94 12 AA403230 94 40 AQ144044
65 13 AA414481 66 40 AQ12376 67 39 AQ22026 67 39 AQ22026 69 26 AQ1235647 69 26 AQ123567 69 26 AQ123619 69 26 AQ13369 69 26 AA413168 69 26 AA41346 69 27 AA41346 69 27 AA41346 69 27 AA41346 70 32 AA615972 71 40 AA21366 71 24 AA112402 72 31 AA415972 73 36 AA415972 74 24 AA718203 74 24 AA718203 75 37 AA21386 76 39 AA718203 76 39 AA718203 76 39 AA718203 80 26 AA929882 77 42 AA718203 81 17 AA718203 81 17 AA718203 81 17 AA718203 81 17 AA718203 81 17 AA718203 81 10 AA718203 81 10 AA718203 81 10 AA718203 81 10 AA718203 81 10 AA718203 81 10 AA718203 81 10 AA718203 81 10 AA718203 81 10 AA718203 81 10 AA718203 81 10 AA718203 81 10 AA718203 81 10 AA718203 81 10 AA718203 81 10 AA718203 81 10 AA718203 81 10 AA73269 81 10 AA23609 82 10 AA23609 83 10 AA23609 84 11 AA737269 87 10 AA23604 88 2 AA1661397 89 35 AA177114	3 493 9 AAI86031 3 494 32 N39812 3 494 10 AA282556 3 494 28 AI510336 3 494 37 FR0028490 3 494 37 AA403230 494 12 AA403230 494 12 AA403230
465 13 AA414481 3 466 40 AQ1233647 466 41 AQ320926 466 41 AQ320926 466 41 AQ320926 467 39 AQ220607 468 42 AQ413168 469 26 AI406999 469 26 AI406999 469 26 AI406999 470 42 AA413972 470 42 AA415972 471 40 AQ24366 471 40 AQ24366 471 40 AQ24366 471 40 AQ24366 472 41 AQ310879 474 24 AI213479 475 27 AI412878 477 29 AA12972 476 28 AI506455 477 42 AA12972 476 28 AI506455 477 42 AA12972 476 28 AI506455 477 42 AA21980 477 42 AA21890 477 42 AA219479 476 28 AI506455 477 42 AA219479 476 28 AA21886 477 49 AA21886 477 49 AA21886 477 49 AA21886 477 49 AA21886 477 49 AA21880 477 49 AA21880 478 40 AA21880 488 41 40 AA21880 488 41 40 AA21886 488 48 48 48 48 48 48 48 48 48 48 48 48	0.3 493 9 AAI86031 0.3 494 12 AA56256 0.3 494 10 AA56255 0.3 494 28 AI51036 0.3 494 37 PR0028490 0.3 494 37 PR0028490 0.3 494 12 AA403230 0.3 494 12 AA403230

1.199 e - 0.01	
GM06994.5prime GM Dros F. rubripes GSS sequenc Fugu rubripes GSS sequenc Ga6260.31 Soares_feta Lado1280.5prime Lp Dros RPC111-10F18.TP RPC111 CHOMO Sapiens GBO Sequenc HOMO Sapiens GBO Sequenc HOMO Sapiens GBO Dros NPC111-10516.TJ RPC111 SD09809.5prime LD Dros NPC111-10516.TJ RPC111 CIT-HSP-206111.TR CIT- CIT-HSP-206111.TR CIT- CIT-HSP-206111.TR CIT- CIT-HSP-206111.TR CIT- CIT-HSP-206111.TR CIT- CIT-HSP-206111.TR CIT- CIT-HSP-206111.TR CIT- CIT-HSP-2058.Sequenc Frubripes GSS sequenc F. rubripes GSS sequen	CIT-HSP-2310H13.TR CIT AU03364 Dictyostelium SD06678.5prime SD Dros HS_2058.A2_G01_MR CIT LD21193.5prime LD Dros C91198 Dictyostelium d LP12284.3prime LD Dros RPCIII-J2ZKIT.THB RPCII HOMO Sapiens Genomic D CIT-HSP-2353L5.TR CIT- RPCIII-92E22.TV RPCIII HOMO Sapiens Genomic D CITBI-E1-2532A18.TF CI RPCIII-92E22.TV RPCIII HOMO Sapiens Genomic D CITBI-E1-2532A18.TF CI RPCIII-19 RPCIII H AU002712 Bombyx mori p HOMO Sapiens Genomic D MM135HJL.I Beddington RPCIII-79G1L.TV RPCIII LD46602.5prime LD Dros HOMO Sapiens Genomic D mt35hOL.I Soares mous HOMO Sapiens Genomic D mt35hOL.I Soares mous HOMO Sapiens Genomic D mt35hOL.I Soares mous HOMO Sapiens Genomic D MT35hOL.I Soares mous HOMO Sapiens Genomic D RPCIII-12614.TJ RPCIII RPCIII-7689.TJ RPCIII
AA803101 FR0012562 FR0012562 FR0012565 FR0012566 FR002338 A12312 A12312 A12312 A233364 A2008998 A2008998 A2008998 A2008998 A2008998 A2008998 A2008998 A2008998 A2008998 A233864 A2008998 A233864 A2008998 A233864 A2008998 A233864 A2008998 A2008998 FR0003330 FR0003330 FR0003393 FR0003393 FR0003393 FR0003393 FR0003393 FR0003393 FR0003393 FR0003399 AA559998 AA599999 AA539914 AA539914	
597 18 25 25 27 28 28 28 28 28 28 28 28 28 28 28 28 28	
21.22.23.1.22.23.22.23.23.23.23.23.23.23.23.23.23.	812881888888888888888888888888888888888
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 00 0 000 0 000 0 000 0 000 0 000 0 000 0
66.31e-03 66.31e-03 66.31e-03 67.31e-03 11.199e-01	
	n214f11.SI NOI_CGAP_GC 119 CD60564A CPIOWAGDNA1 C 119 ES_100_B1_E01_T7A RC 119 C78218 Mouse 3.5-dpc b 1.15 C78218 Mouse 3.5-dpc b 1.15 C78218 Mouse 3.5-dpc b 1.15 C78218 Mouse 1.5-dpc b 1.15 E. Tubripes GSS sequenc 1.16 C90163 Dictyostelium d 6.39 G998a05.x1 Scares NFL_ 119 RPC111-45J14.TK RPC111 1.15 RPC111-45J14.TK RPC111 1.15 F. Tubripes GSS sequenc 6.31 F. Tubripes GSS sequenc 6.31 F. Tubripes GSS sequenc 6.31 RPC1-11-17703.TJ RPC1 6.33 RPC1-11-17703.TJ RPC1 1.15 F. Tubripes GSS sequenc 6.31 RPC1-11-17703.TJ RPC1 1.15 F. Tubripes GSS sequenc 6.31 RPC1-11-17703.TJ RPC1 1.15 F. Tubripes GSS sequenc 1.15 F. Tubripes
4176000 ms99405.rl Scares mous 6.33 40283869 RPCIII-78C19.TJ RPCIII 6.31 26 AA8818627 VX62a07.rl Stratagene 6.33 41562985 TENS2145 T. cruzi epim 1.15 8 B56766 TIT-4SP-200MS.TPB CIT 1.11 27 AA405256 TIT-4SP-200MS.TPB CIT 1.11 28 AA405256 TIT-18TE-12-1550920.rp CI 1.11 29 AA405256 TIT-18TE-12-1550920.rp CI 1.11 20 AA613310 FUGU rUbripes GSS sequ 1.15 20 AA61330 RPCIII-110129.rV RPCII 1.15 21 AA615307 WOOlh05.rl Stratagene 6.33 22 AA615307 WOOlh05.rl Stratagene 6.33 23 AA615307 RPCIII-110129.rV RPCII 1.15 24 AA615307 WOOlh05.rl Stratagene 6.33 25 AA61830 RPCIII-110129.rV RPCII 1.15 26 AA980810 NCM3B9T7 Wycelial Neur 1.15 27 RA0002129 RPCIII-110249.rV RPCII 1.15 28 AA93366 MS TENS0921 FENS09	18 AA760852 nz14f11.s1 NCI CCAP_GC 1.15 42 AQ44183565 CpG0564A CPIOWAGDNA1 C 1.16 42 AQ44183565 HS_5106_B1_E01_T7A RPC 1.16 6 C78218
3 528 9 AA176000 ms99d05.rl Soares mous 6.33 529 41 AQ283869 RPC111-78C19.TJ RPC111 6.33 530 20 AA891862 NFC111-78C19.TJ RPC111 6.33 530 20 AA896171 VX6A207.rl Stratagene 6.33 530 28 A156286 TEN22145 T. Cruzi epim 115 534 42 AA605545 GITH-85038.AL_B002.Tr RPC1 115 534 42 AA605545 GITH-85038.AL_B002.Tr RPC1 115 538 23 A1101047 GH09488.prime GH Dros 116 531 28 A1541873 SON7825.prime SD Dros 116 531 28 A1541873 SON7825.prime SD Dros 116 531 28 A1541873 SON7825.prime SD Dros 116 531 28 A1541873 SON7825.prime SD Dros 116 531 28 A1541873 SON7825.prime LD Dros 116 531 28 A141873 SON7825.prime LD Dros 116 531 28 A1541873 SON7825.prime LD Dros 116 531 28 A1541873 SON7825.prime LD Dros 116 531 28 A1541346 CITHSP-2115.ALG06.MR CIT 116 531 28 A15413460 Merry Dros 116 531 28 A15413460 Merry Dros 116 552 28 A15413460 Merry Dros 116 553 28 A15413460 Merry Dros 116 553 28 A15413460 Merry Dros 116 553 28 A15413460 Merry Dros 116 553 37 RR001219 CITHSP-2019A-A17 RCIT 116 550 28 A15413460 Merry Dros 116 550 28 A15413460 Merry Dros 116 550 28 A15413460 Merry Dros 116 550 38 B53265 GITH-RP-2009R/T PCIT 116 550 37 RR001012 RPC111-10311.rr PRC11 116 560 37 RR001012 RPC111-10311.rr PRC11 116 560 37 RR001012 RPC111-10311.rr PRC11 116 560 37 RR001012 RPC111-10311.rr PRC11 116 560 37 RR001012 RPC111-10311.rr PRC11 116 560 37 A001012 RPC111-10311.rr PRC11 116 560 37 A001012 RPC111-10311.rr PRC11 116 57 A15 A001012 RPC111-10311.rr PRC11 116 57 A15 A001012 RPC111-10311.rr PRC11 116 57 A15 A001013 RPC111-10311.rr PRC11 116 57 A15 A001013 RPC111-10311.rr PRC11 116 57 A15 A001013 RPC111-10311.rr PRC11 116 57 A001013 RPC111-10311.rr PRC11 116 57 A001013 RPC111-10311.rr PRC11 116 57 A001013 RPC111-10311.rr PRC11 116 57 A001013 RPC111-10311.rr PRC11 116 57 A001013 RPC111-10311.rr PRC11 116 57 A001013 RPC111-10311.rr PRC11 116 57 A001013 RPC111-10311.rr PRC11 116 57 A001013 RPC111-10311.rr PRC11 116 57 A001013 RPC111-10311.rr PRC11 116 57 A001013 RPC111-10311.rr PRC11 116 57 A001013 RPC111-10311.rr PRC11 116 57 A001013 RPC111-10311.rr PRC11 116 57	3 576 18 AA760852 nz14f11.51 NCI.CGAP_GC 1.15 3 577 34 42 AQ441833 HS_5106_B1_E01_T7A RPC 1.15 3 579 16 C78218 C78218 C78218 DCISCONSES 3.59 3 579 16 C78218 C78218 C78218 DCISCONSES 3.59 3 579 16 C78218 C78218 DCISCONSES 3.59 3 579 24 AZ26592 F.rubripes GSS sequenc 1.15 3 583 37 FR002742 CSRL-8099 u CSRL flow 1.15 3 583 37 FR0021168 F.rubripes GSS sequenc 1.15 3 584 24 AZ22373 9998a05.x1 Scares 2NbM 1.15 3 584 24 AZ22373 9998a05.x1 Scares 2NbM 1.15 3 584 20 AA923056 RPCIII-45114.TK RPCIII 1.15 3 585 22 AU016721 AU016721 MOUSE 4.00.cel 1.15 3 587 37 FR0021323 F.rubripes GSS sequenc 6.31 5 58 24 AA322289 mp56b11.x1 Scares 2NbM 1.15 3 587 37 FR002133 F.rubripes GSS sequenc 6.31 5 58 42 AQ414581 RPCI-11-177C3.TJ RPCI 6.33 5 58 37 RP031084 F.rubripes GSS sequenc 1.15 3 592 37 BC2733 T20K16TF.1 TAM0 Arabid 1.15 5 593 37 RC27317 RPCI-1-177C3.TJ RPCIII 1.15 5 593 37 RC27317 RPCI-1-177C3.TJ RPCIII 1.15 5 593 37 RC2731 T20K16TF.1 TAM0 Arabid 1.15 5 593 38 AQ201178 RPCIII-16M8 TJ RPCIII 1.15 5 593 38 AQ201178 RPCIII-177C3.TJ RPCIII 1.15 5 593 38 AQ201178 RPCIII-16M8 TJ RPCIII 1.15 5 593 38 AQ201178 RPCIII-16M8 TJ RPCIII 1.15 5 593 38 AQ201178 RPCIII-16M8 TJ RPCIII 1.15 5 593 38 AQ201178 RPCIII-177C3.TJ RPCIII 1.15 5 593 38 AQ201178 RPCIII-16M8 TJ RPCIII 1.15 5 593 38 AQ201178 RPCIII-16M8 TJ RPCIII 1.15 5 594 38 AQ201178 RPCIII-177C3.TJ RPCIII 1.15 5 594 38 AQ201178 RPCIII-177C3.TJ RPCIII 1.15 5 594 38 AQ201178 RPCIII-177C3.TJ RPCIII 1.15 5 595 505 505 505 505 505 505 505 505 50
528 9 AA176000 ms999d05.r1 Soares mous 6.33 529 41 AQ283869 RPCIII-78C19.TJ RPCIII 6.31 530 26 AA8818627 VX6Za07.r1 Stratagene 6.33 530 28 A1562965 CIT-4SP-200M5.rpe CIT-1553 534 40 AQ405266 CIT-4SP-200M5.rpe CIT-1553 534 40 AQ405266 CIT-4SP-200M5.rpe CIT-1553 534 40 AQ405266 GIT-4SP-200M5.rpe CIT-1553 534 40 AQ405266 GIT-151509020.rpc IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	0.3 576 18 AA760852 nz14f11.s) NCI.CGAP_GC 1.15 0.3 578 42 AQ441833 HS_5106_B1_E01_T7A RPC 1.15 0.3 579 16 C78218 C78218 HS_5106_B1_E01_T7A RPC 1.15 0.3 579 16 C78218 C78218 HS_5106_B1_E01_T7A RPC 1.15 0.3 579 24 A1266592 LPO4519.5prime LP Dros 1.15 0.3 583 37 FR002742 F.rubripes GSS sequenc 1.25 0.3 583 37 FR0021168 F.rubripes GSS sequenc 1.25 0.3 584 24 A1222373 9998a05.x1 Soares_NFL_ 1.15 0.3 584 24 A1222373 9998a05.x1 Soares_NFL_ 1.15 0.3 585 39 AQ20306 RPCIII-4511.TK RPCIII 1.15 0.3 585 39 AQ20306 RPCIII-4511.TK RPCIII 1.15 0.3 585 39 AQ20305 RPCIII-4511.TK RPCIII 1.15 0.3 587 37 FR0021323 F.rubripes GSS sequenc 6.31 0.3 587 37 FR0021323 F.rubripes GSS sequenc 6.31 0.3 588 42 AQ414581 RPCI-11-177C3.TJ RPCI 6.3 0.3 588 42 AQ414581 RPCI-11-177C3.TJ RPCI 1.15 0.3 592 37 B62733 T20K16FF.1 TAM0 Arabid 1.15 0.3 593 38 AQ203178 RPCIII-16M8.TJ RPCIII 1.15 0.3 593 38 AQ203178 RPCIII-16M8.TJ RPCIII 1.15 0.3 594 38 AQ203178 RPCIII-16M8.TJ RPCIII 1.15 0.3 594 38 AQ44107 CIT-16PP-2318P22.TF CIT 1.15 0.3 594 38 AQ44107 CIT-16PP-2318P22.TF CIT 1.15

υυ

ουου

91e+00 91e+00 91e+00	של לי	1.91e+00 1.91e+00	1e+	\$ 6	4 ~ 1	1.91e+00 1.91e+00	16.	1.91e+00		16.		.91e+	.91	1.91e+00 1.91e+00	.91e+		1.91e+00	1.91e+00	.91	1.91e+00 1.91e+00	1.91e+00	1.91e+00 1.91e+00	1.91e+00 1.91e+00	26.5	1.91e+00	1.91e+00 1.91e+00	9.19	.91	. 6	9.6	.91	1.91e+00 1.91e+00	. 91		16.		.91	.91	1.91e+00 1.91e+00	.91	.91e+	1.91e+00 1.91e+00
v RPCI11 1 atagene 1 RPCI11 1 mouse em		1 Ko mouse em 1 0 Leishmania 1 bromosoma 7 B	vr72d01.s1 Knowles Sol 1	CGAP_Lu	res brea	sequenc GSS sequ 1										, ,				CGAP_Ut] atagene]	320.TR CI	atagene IJ RPCI1			stead mo	res feta PC-12 ce																
CITBI-E1-2523D18.TR CI RPCII1-124J9.TV RPCII1 ms34a02.rl Stratagene RPCIII-73L8.TJ RPCIII vc71f11 v1 K0 monise em	voltility no vo07c04.rl Str	vc22b03.yl Ko mouse LmFrAm0250 Leishmani	d01.s1 Kno	e02.s1 NCI	cl2.rl Soa	bripes GSS rubripes	f06.r1 Soa	265_B2_C10	a01.x1 Soa 619 Sprime	6128 Mouse	1811 Mouse	166_B1_F06	e04.x1_Bar	EU5.SI NCI HSP-2295L1	h10.x1 NCI	glo.rl Bar g02.xl NCI	Am0333 Lei	d03.rl Soa bripes GSS	065_B1_F09	a10.x1 NCI e07.r1 Str	I-E1-2529B	e06.r1 Str 11-142M22.	907.sl Soa h07.rl Soa	3132 Mouse	hl2.xl Bar	f09.rl Soa 07948 Rat	f08.x1 Soa 000 A2 F01	6462 Pinea	.015D5R Yuj	g01.x1 Soa k09217 Dro	39p10/413D	a02.x1 Str a01.x1 NCI	263_A2_MF	h10.sl Str q10.xl Kno	094_B1_H01	076_B1_D02	906.x1 NCI	elo.rl Str	004 A1 F11	b11.s1 Soa	e04.rl Soa	_3105_A2_H01_ :60f11.s1 Know
AQ278873 AQ344015 AA168740 AQ268218 AT508764																											AI415308 AO088386															
271 40 278 41 279 9 279 40																																										
00000		900					0.0				ö		0	00							0.0		00	00		. o	00					000		00		00		0		0.0		
741 742 19 743 19			1	4			Н,	-1 -1					· -																		1 -							-		. —		
0 00			000		ນ ບ			ပ ပ			o t			υ	υ		υ		υ	υ		υυ			υ					υ			υ	C		O		υ			υυ	υ
																		-	-			-																				
1.17	1.17		100	9,	Ξ:		Ξ,	- ".	4.0	1.19e-0	1.	1.19e- 1.19e-	1.1	1 6	1.19e-	1.19	1.19	6.3	1.19	1.19e-0 1.19e-0	6.31e-		6.31e-	2.90e-	1.19e-U	6.3	1.19	6.31e-0	1.91e+0	<u>ن</u> ه	.91e+0	0,0	.91e+0	.91	.91e+0	.91e+0	יס ע	.91e+	ο, σ	.91e+	.91e+	1.91e+00 1.91e+00
MGI Rice KBFC RPC res mous x mori p	HL Dros	.TJ RPCI res feta	enomic D	res mous	enomic D	5.TF CIT ostelium	ostelium	ostellum atagene	res mous	UGI Rice	ostelium	enomic D	enomic D	enomic D	T7 CIT	LD Dros	rafish W	atagene	ostelium	atagene CUGI Ric	atagene	HL Dros Arabido	Arabidop	_CGAP_GC	nromosom Magnapor	Arabido phila me	e fetal phila me	hromosom	sequenc	CGAP_CO	B RPCIII	RPCI11	rugia ma	res mela	CGAP_GC	O.TR CIT	alized r res feta	MF CIT	res feta J RPCI11	1 Soares mous	atagene _cGAP_GC	ized infa
nbxb0034M17f CUGI Rice RPCIII-22K17.TKBFC RPC mg35f01.rl Soares mous AU002893 Bombyx mort p	ITB1-E1-25558 HL02318.5prime	RPCI-11-165D17 2a49h01.r1 Soa	domo sapiens g	7u55g05.rl Soa	domo sapiens g	CITBI-E1-2503H AU039558 Dicty	AU034494 Dicty	7706e08.rl Str	1999c05.rl Soa	bxb0049P21r C	AU033551 Dicty	toussass picty Tomo sapiens q	domo sapiens g	Tomo sapiens g	4S_2007_A1_G03	.D31410.5prime	fb49h08.x1 zeb	no62h06.xl Str	40033433 Dicty	ae56e09.sl Str nbxb0004aF05r	nm74b12.x1 Str	HL03118.5prime 722F23-Sp6 IGF	726G16-T7 IGF	24411.81 NCI	domo sapiens c ngae0003cD05f	14M23-Sp6 TAMU 173718C8 Droso	AF012875 Bovin	Homo sapiens c	fomo sapiens c F.rubripes GSS	of67h01.s1 NCI	RPCI11-15C2.TP	RPCI11-72L4.TJ RPCI11	MBAFCF7F02T3 B	za08c02.s1 Soa	2806a03.s1 NCI	CIT-HSP-2204A2	:ST219258 NOFM vd81a03.r1 Soa	4S_2228_A1_B10	ya50f11.s1 Soa RPC111-152D6.T	na84h09.yl Soa	rrist sand	NIB340 Normalized infa CIT-HSP-2173J15.TF CIT
AQ289098 AQ014227 AA000678 AU002893																																										
2222	AQ425	M025	AG00	AA754	AGOO	AQ263	AU034	AA798	AA981	AQ362	AU033	AG0013	AG009	AG009	AQ269	AA951	A1477	AI327	AU033	AA608 AQ050	AI323	AA697 B1321	B1266	AA769	AF010	B1180	AF012	AF101	FR00	AA834	B8238	AQ267	AA180	N7307	AA250	AQ003	T8662	AQ066	T6691(AI5363	AA498	T1710
664 41 AC 669 39 AC 676 34 AA 676 26 AU	17	33 2	37	17	37	40	24	18	21	41	24	37	37	37	40	21	27	25	24	15	52	37	37	18	22	37	20	47	37	18	38	200	10	e a	20	38	7 6	38	19	28	14	38 8
23 3 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	3 679 17	.3 679 42	.3 687 37	.3 689 17	.3 696 37	.3 698 40 .3 702 25	3 708 24	.3 710 18	.3 713 21	.3 719 41	.3 721 24	.3 723 37	.3 724 37	3 729 37	.3 740 40	3 752 21	.3 760 27	3 782 25	.3 813 24	.3 818 15 .3 820 42	.3 823 25	.3 855 17 .3 880 37	3 912 37	.3 934 18	.3 1064 22	3 1120 37	3 1234 20	.3 1801 42	.2 105 37	.2 121 18	.2 146 38	.2 148 40 2 169 22	.2 176 9	.2 180 33 2 207 R	.2 216 10	.2 222 38	.2 234 19	.2 237 38	239 19	.2 248 28	.2 250 14	.2 261 8 .2 262 38
.3 664 41 .3 669 39 .3 676 26	23 0.3 679 17	20 0.3 679 42 20 0.3 679 33	20 0.3 687 37	21 0.3 689 17	20 0.3 696 37	20 0.3 698 40 20 0.3 702 25	20 0.3 708 24	21 0.3 710 18	20 0.3 713 21	20 0.3 719 41	20 0.3 721 24	20 0.3 723 37	20 0.3 724 37	20 0.3 729.37	20 0.3 740 40	20 0.3 752 21	20 0.3 760 27	21 0.3 782 25	20 0.3 813 24	20 0.3 818 15 20 0.3 820 42	21 0.3 823 25	20 0.3 855 17 20 0.3 880 37	21 0.3 912 37	22 0.3 934 18	20 0.3 1064 22	21 0.3 1120 37 20 0.3 1189 38	20 0.3 1234 20	21 0.3 1801 42	21 0.3 6921 41 19 0.2 105 37	19 0.2 121 18	19 0.2 146 38	19 0.2 148 40 19 0.2 169 22	19 0.2 176 9	19 0.2 180 33	19 0.2 216 10	19 0.2 222 38	19 0.2 231 23 19 0.2 234 19	19 0.2 237 38	19 0.2 239 19 19 0.2 242 42	19 0.2 248 28	19 0.2 250 14 19 0.2 252 17	19 0.2 261 8 19 0.2 262 38

υυυ υ

O

0 0 0 0

υυυ υ

c 000

υ υ

yu71bb5.81 W ou02h09.81 S ou02h	
H71462 AA993885 AA0444673 AQ444673 AQ444673 AQ444673 AQ556887 AA956887 AA956887 AA956887 AA956887 AA956887 AA1330436 AA1330436 AA1330436 AA1284655 AA7284655 AA7284655 AA7284655 AA7284655 AA7284655 AA7284655 AA7284655 AA73845631 AA9322899 AA738456 AA738465 AA738465 AA738465 AA738465 AA738465 AA738690 AA738465 AA738690 AA738465 AA738690 AA738465 AA738690	
$\begin{array}{c} 444444444446787888888888888888888888888$	

\$	0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0
00 00 0 00 00 00 00 00 0 0 0 0 0 0 0 0	C 956 C 957 958 959
	
	1.91e+00 1.91e+00 1.91e+00 1.91e+00
2010 10 10 10 10 10 10 10 10 10 10 10 10	1.91e+ 1.91e+ 1.91e+ 1.91e+
	yz52b01.s1 Morton Feta 1.91e+ HS_3083_B2_H03_MF CIT 1.91e+ Homo sapiens YAC 307A1 1.91e+ mm01h03.r1 Stratagene 1.91e+
mg88a04.x1 Stratagene 1.91e+ GSSTC01195 Trypanosoma 1.91e+ vn09c04.x1 Stratagene 1.91e+ vn09c04.x1 Stratagene 1.91e+ zo63h06.s1 Stratagene 1.91e+ yco63h06.y1 Scares feta 1.91e+ ye70b09.y1 Soares feta 1.91e+ ku04387 Normalized infa 1.91e+ ku240.x1 Stratagene 1.91e+ x153e02.s1 Soares feta 1.91e+ ku260.x2 s1 Soares feta 1.91e+ ku260.x2 s1 Soares plac 1.91e+ ku260.x2 s1 Soares plac 1.91e+ ku260.x2 s1 Soares plac 1.91e+ ku260.x2 ku20.x7 cir 1.91e+ ku260.x2 ku20.x7 cir 1.91e+ ku20.x1 Stratagene 1.91e+ ku20.x1 Str	33 NG7876 yz52b01.sl Worton Feta 1.91e+ 40 AQ186282 HS_3083_BZ_H03_MF CIT 1.91e+ 37 AF017579 Homo sapiens YAC 307A1 1.91e+ 36 AA109538 mm01h03.rl Stratagene 1.91e+
127 A1452554 mg88a04.x1 Stratagene 1.91e+ 42. A0445401 16. GSSTC0195 TYPADOSOMA 1.91e+ 16. AAA156533 CTTT 191e+ 17. AAA156533 CTTT 191e+ 17. AAA156539 CTTT 191e+ 17. AAA1563804 CTTT 191e+ 17. AAA1563804 CTTT 191e+ 17. AA639405 2.053h06.x1 Stratagene 1.91e+ 17. AA639405 2.053h06.x1 Stratagene 1.91e+ 17. AA639405 2.053h06.x1 Stratagene 1.91e+ 17. AA639405 2.155605.A1_C05.MR CTT 1.91e+ 17. AA453111 SABST NORMARIZED IN 191e+ 17. AA45311 SABST NORMARIZED IN 191e+ 17. AA45311 SABST NORMARIZED IN 191e+ 17. AA45311 SABST NORMARIZED IN 191e+ 17. AA45311 SABST NORMARIZED IN 191e+ 17. AA45311 SABST NORMARIZED IN 191e+ 17. AA45311 SABST NORMARIZED IN 191e+ 17. AA45311 SABST NORMARIZED IN 191e+ 17. AA45311 SABST NORMARIZED IN 191e+ 17. AA45311 SABST NORMARIZED IN 191e+ 17. AA45311 SABST NORMARIZED IN 191e+ 17. AA45311 SABST NORMARIZED IN 191e+ 17. AA45311 SABST NORMARIZED IN 191e+ 17. AA45311 SABST NORMARIZED IN 191e+ 17. AA45311 SABST NORMARIZED IN 191e+ 17. AA45311 SABST NORMARIZED IN 191e+ 17. AA45311 SABST NORMARIZED IN 191e+ 17. AA45311 SABST NORMARIZED IN 191e+ 17. AA45311 SABST SAB	.2 478 33 N67876 yz52b1.sl Morton Feta 1.91e+ .2 479 40 AQ186282 HS_3083_B2_H03_MF CIT 1.91e+ .2 479 37 AF017579 Homo sapiens YAC 307Al 1.91e+ .2 479 36 AA109538 mm0lh03.rl Stratagene 1.91e+
101 17 A141254 mgg8a04 X1 Stratagene 1.91e+ 2	9 0.2 478 33 N67876 yz52b01.s1 Morton Feta 1.91e+ 9 0.2 479 40 AQ186282 HS_3083_B2_L03_MF CIT 1.91e+ 9 0.2 479 37 AF017579 Homo sapiens YAC 307A1 1.91e+ 9 0.2 479 36 AA109538 mm01h03.r1 Stratagene 1.91e+

```
Caenorhabditis elegans.

Caenorhabditis elegans

Caenorhabditis elegans

Bukaryota; Metazoa, Nematoda; Secernentea; Rhabditia; Rhabditida;

Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis;

1 (bases 1 to 300)

Kohara,Y., Motohashi,T., Tabara,H., Watanabe,H., Sugimoto,A.,

Sano,M., Miyata,A. and Nishigaki,A.

Expression map of the C.elegans genome

Unpublished (1996)
                                                                   1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

1. 916+00

                        1.91e+00
1.91e+00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C38304 Yuji Kohara unpublished CDNA Caenorhabditis elegans CDNA Clone yk491a5 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            On Sep 12, 1996 this sequence version replaced gi:1393930
                                                                                                                                                                                     rf80e02.sl NCI_CGAP_CO
zf66f10.sl Soares reti
A0003627 Bombyx mori p
nbxb0026M19f CUGI Rice
CITBL-E1-250601.rF CIT
vt04a11.rl Barstead mo
CITBI-E1-255N13.rF CI
                                                                                                                                                                                                                                                                                                                                                   CIT-HSP-231004.TF CIT-
PRCILL 89N12.TV RPCILL
UI-R-A0-a6-10-0-UI.S
CITBI-E1-2530J8.TR CIT
EST196659 Normalized r
C92401 Dictyostellum d
RPCIII-153DI7.TJ RPCII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens genomic D mp77h12.x1 Soares 2NbM AU004076 Bombyx mori p Homo sapiens genomic D CIT-HSP-2168119.TR CSRL-87A5-u CSRL flow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens genomic D
CIT-HSP-2339M14.TR CIT
GH13492.5prime GH Dros
  Fugu rubripes GSS sequ
nbxb0039G17r CUGI Rice
Fugu rubripes GSS sequ
                                                                      F.rubripes GSS sequenc
EST201236 Normalized r
                                                                                                                    ze27d01.rl Soares reti
TENG0091 T. cruzi epim
zm88b02.rl Stratagene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   T3F24-Sp6 TAMU Arabido
CITBI-E1-2548N13.TF CI
CIT-HSP-2376C21.TR CIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens chromosom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens chromosom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cSRL-176D7-u cSRL flow
RPCIII-159M17.TJ RPCII
C93949 Dictyostelium d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AU050950 Sugano mouse
RPCI11-42M18.TJ RPCI11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conc. Library Lab
National Institute of Genetics
Nata 1111, Mishima, Shizuoka 411, Japan
Tel: 0559-75-071
Fax: 0559-75-6240
Email: ykohara@ddbj.nig.ac.j.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ALIGNMENTS
                     AQ291529
FR0028920
FR0007746
AA945737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AQ056266
AI135660
AF101852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AI323623
AU004076
AG012423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AQ110183
AG001972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AQ046625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B06832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       293949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g2374541
C38304.1 GI:2374541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Yuji Kohara
                          \begin{array}{c} 69696\\ 69696\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 6979\\ 697
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         000
```

```
D/5533 360 bp mRNA EST 14-DEC-1995
CELKIO5HIF Yuji Kohara unpublished cDNA Caenorhabditis elegans CDNA
Clone ykl05h1 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Caenorhabditis elegans.
Caenorhabditis elegans
Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 360)

Kohara, Y., Mitsuki, H., Nishigaki, A., Motohashi, T., Sugimoto, A. and Tabara, H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181 ATGTGTGAAAATGGGAAGAGAAATGATAGAATGATAAAGTGAAATGAGTATAGGATAACA 240
                                                                                                                                                                                                                                                                                                                                   61 AGCATAGTACATATATATACTGGGCACAACAACTAATCAAATTCAAAACGAGTTATTA 120
                                                                                                                                                                                                                                                                                                                                                                                                            121 AAATTATGCGTTCGAGACACAAACGTCATAATTTTAGATTATCGTANAGAAATGGAA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241 ATATACACATGGTTTTAAACTAATTGGGCGAAAGAGAACTGGGGGAGAAGATACAGACAA 300
                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                             1 TATGGTACGGTAGGTTGGTGGGGTTGGGGTGATCTATGAAACTATTTTGTTGATAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. 360
/organism="Caenorhabditis elegans"
/strain="CB1489 him-8(e1489)"
/note="dev stage=varied, sex=Hermaphrodite male, tissue_type=whole animal"
/db_aref="taxon:6239"
/clone="yk105h1"
/organism="Caenorhabditis elegans"
/strain="CB1489 him-8(e1489)"
/note="CB1489 him-8(e1489)"
/note="CB1489 him-8(e1489)"
/inote="CB1489 him-8(e1489)"
/db_xref="taxon:6239"
/clone="yk491a5"
/clone="yk491a5"
/clone=lib="Yuji Kohara unpublished cDNA"
29 c 72 g 80 t l others
                                                                                                                                                                                                                           ö
                                                                                                                                                                                     Length 300;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="vk105h1"
/clone_lib="ruji Kohara unpublished cDNA"
63 c 97 g 91 t
                                                                                                                                                                                                                         1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Toward an expression map of the C.elegans genome
                                                                                                                                                                                     Score 299; DB 15;
Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yata 1111, Mishima, Shizuoka 411, Japan Tel: 0559-75-0771
Fax: 0559-75-6240
Email: ykohara@ddbj.nig.ac.j
Insert Length: 2279 Std Error: 0.00.
                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gene Library Lab
National Institute of Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g1121320
D75533.1 GI:1121320
                                                                                                                                                                                     3.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Yuji Kohara
                                                                                                                                                                                                      Best Local Similarity 99.7%;
Matches 299; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (1994)
                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                        Сp
                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                            Сp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
```

```
2310 CTCGAAGTTCTCATCGCAAAACAAGTGTTGAATAGTGATAATGGAGATATGATTAAT 2366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
                                                          RESULT
                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
     δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Óλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida; Rhabditina; Rhabditida; Rhabditida; Rhabditida; Rhabditida; Rhabditida; L (bases 1 to 360)
Kohara,Y., Motohashi,T., Tabara,H., Watanabe,H., Sugimoto,A., Sano,M., Myyata,A. and Nishigaki,A.
Expression map of the C.elegans genome
Unpublished (1996)
                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                           2169 TAAATCGAAAATCAAAATCGTACTCTGACTACGGGTCACGAGAGAGGGCAACCATCAGCCG 2228
                                                                                                                                                                      2229 AAGATGATGCGTCAAGATAGAAGGAGCTTGCTAGAGAGGAACATTATGATGTTCTCTAGT 2288
                                                                                                                                                                                                                                              2289 CATCTAAAAGTCGATGAAATTCTCGAAGTTCTCATCGCAAAACAAGTGTTGAATAGTGAT 2348
                                                                                                                                                                                                                                                                                                                                                                                                                                    C39290 Yuji Kohara unpublished cDNA Caenorhabditis elegans cDNA clone yk198f10 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2250 AGGAGCTTGCTAGAGAGGAACATTATGATGTTCTCTAGTCATCTAAAAGTCGATGAAATT 2309
                                                                                                                                                                                                                          122 CATCTAAAAGTCGATGAAATTCTCGAAGTTCTCATCGCAAAACAAGTGTTGAATAGTGAT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 AGGAGCTTGCTAGAGAGGAACATTATGATGTTCTCTAGTCGATGAAAGTCGATGAAATT 120
                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 CTCTGACTACGGGTCAGTAGAGAGGTCAACCATCAGCCGAAGATGATGCGTCAAGATAGA 60
                                                                                                                                                                                                                                                                                                                                                                                                                    10-SEP-1997
                                         0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 CTCGAAGTTCTCATCGCAAACAAGTGTTGAATAGTGATAATGGAGATATGATTAAT 177
                                                                        2 TAAATCGAAAATCAAATCGTACTCTGACTACGGGTCAGTAGAGAGGTCAACCATCAGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        On Sep 12, 1996 this sequence version replaced gi:1393644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /strain="CB1489 him-8(e1489)"
/strain="CB1489 him-8(e1489)"
/note="dev_stage=varied, sex=Hermaphrodite male,
tissue_type=whole animal"
/db_xref="taxon:6239"
/clone="yk198f10"
/clone="yk198f10"
a 67 c 100 g 91 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 177; DB 15; Length 360; Pred. No. 0.00e+00;
   Length 360;
                                       0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Caenorhabditis elegans"
 Score 198; DB 32;
Pred. No. 0.00e+00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yata 1111, Mishima, Shizuoka 411, Japan
Tel: 0559-75-0771
                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gene Library Lab
National Institute of Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: ykohara@ddbj.nig.ac.j.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Caenorhabditis elegans.
Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                          2349 AATGGAGATATGATTAAT 2366
                                                                                                                                                                                                                                                                                                                                                                                                                360 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Yuji Kohara
Query Match 2.6%;
Best Local Similarity 100.0%;
Matches 198; Conservative
                                                                                                                                                                                                                                                                                                   182 AATGGAGATATGATTAAT 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C39290.1 GI:2375527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         / Match 2.3%;
Local Similarity 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              177; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fax: 0559-75-6240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q2375527
                                                                                                                                                                                                                                                                                                                                                                                                                  C39290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                        a
                                                                                                             ò
                                                                                                                                                                                     ò
                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

```
Eukaryotta: Metazoa: Nematoda; Secernentea; Rhabditia; Rhabditida; Rhabditina; Rhabditina; Rhabditina; Rhabditidae; Peloderinae; Caenorhabditis. 1 (bases 1 to 377)

Kohara, Y., Motohashi, T., Tabara, H., Watanabe, H., Sugimoto, A., Sano, M., Miyata, A. and Nishigaki, A.

Expression map of the C.elegans genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
1 (bases 1 to 300)
Kohara; Y., Motohashi, T., Tabara, H., Watanabe, H., Sugimoto, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
C51090 377 bp mRNA EST 11-SEP-1997
C51090 Yuji Kohara unpublished cDNA Caenorhabditis elegans cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2214 GTCAACCATCAGCCGAAGATGATGATGATCAAGAAGGAGGAGGAGGAACATT 2273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2274 AIGATGTTCTCTAGTCATCTAAAAGTCGATGAAATTCTCGAAGTTCTCGAAGTTCTCATCGCAAAACAA 2333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C29898 Yuji Kohara unpublished cDNA Caenorhabditis elegans cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    77 AIGAIGITCICIAGICAICIAAAAGICGAIGAAAIICICGAAAGIICICAICGCAAAACAA 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17 GTCAACCATCAGCCGAAGATGATGCGTCAAGATAGAAGGAGCTTGCTAGAGGAGGAACATT 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                     On Sep 12, 1996 this sequence version replaced gi:1405104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /strain="CB1489 him-8(e1489)"
/note="dev_stage=varied, sex=Hermaphrodite male, tissue_type=whole animal"
/db_xref="taxon:6239"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 377;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            unpublished cDNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Caenorhabditis elegans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 153; DB 15; I Pred. No. 1.03e-296;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Gene Library Lab
National Institute of Genetics
Yata 1111, Mishima, Shizuoka 411, Japan
Ex: 0559-75-071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               92 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    137 GIGITGAATAGIGAIAAIGGAGATAIGAITAAI 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clône="yk491a5"
/clone_lib="Yuji Kohara
74 c 103 g 9
                                             clone yk491a5 5', mRNA sequence.
C51090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   clone yk228a6 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: ykohara@ddbj.nig.ac.j.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mRNA
                                                                                                                                                          Caenorhabditis elegans. Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300 bp
                                                                                                               C51090.1 GI:2388343
                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Yuji Kohara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /map="11q23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C29898.1 GI:2361694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 2.0%;
Best Local Similarity 100.0%;
Matches 153; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 106 a
                                                                                            q2388343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q2361694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C29898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C29898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sonrce
                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                     ACCESSION
                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
```

```
359 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C50455.1 GI:2387708
 Query Match 0.4%;
Best Local Similarity 100.0%;
Matches 29; Conservative
                                                                                                                                                                                                                                                              GI:277716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          115 a
                                                                                                                                                                                                                                                              T01235.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      92387708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C50455
                                                                                                                                                                            T01235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST.
                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
SOURCE
                                                                                                                                                                                                                                                              VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION CELKO86DZR Yuji Kohara unpublished cDNA Caenorhabditis elegans CDNA CLONE yk86d12 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota: Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida; Shabditina: Rhabditoldea; Rhabditidae; Peloderinae; Caenorhabditis. 1 (bases 1 to 337)

Kohara, Y., Mitsuki, H., Nishigaki, A., Motohashi, T., Sugimoto, A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
Sano,M., Miyata,A. and Nishigaki,A.
Expression map of the C.elegans genome
Unpublished (1996)
On Sep 12, 1996 this sequence version replaced gi:1393504.
                                                                                                                                                                                                                                                          /strain="CB1489 him-8(e1489)"
/note="dev_stage=varied, sex=Hermaphrodite male,
tissue_type=whole animal"
/db_xref="taxon:6239"
/clone="yk22886"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="dev_stage=varied, sex=Hermaphrodite male, tissue_type=whole animal" /db_xref="taxon:6239"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 On Apr 14, 1993 this sequence version replaced gi:503294
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ó
                                                                                                                                                                                                                                                                                                                                                                                                                         Length 300;
                                                                                                                                                                                                                                                                                                                                                                        1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone_lib="Yuji Kohara unpublished cDNA"
52 c 72 g 94 t 3 others
                                                                                                                                                                                                                                                                                                                                                  /clone_lib="Yuji Kohara unpublished cDNA"
42 c 60 g 86 t 1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Toward an expression map of the C.elegans genome
                                                                                                                                                                                                                                              /organism="Caenorhabditis elegans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Caenorhabditis elegans"/strain="CB1489 him-8(e1489)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gene Library Lab
National Institute of Genetics
Yata 1111, Mashima, Shizuoka 411, Japan
Tel: 0559-75-0771
Fax: 0559-75-6240
Email: ykohara@ddj.nig.ac.j
High quality sequence stop: 267.
                                                                                                                                                                                                                                                                                                                                                                                                                         Score 29; DB 15; I Pred. No. 5.37e-15;
                                                                                   Contact: Yuji Kohara
Gene Library Lab
National Institute of Genetics
Yata 1111, Mishima, Shizuoka 411, Japan
Tel: 0559-75-0771
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1423 TACTGTAGTTTTCGCTACGAGATATTTTGC 1394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            171 TACTGTANTITICGCTACGAGATATITIGC 200
                                                                                                                                                                                         Email: ykohara@ddbj.nig.ac.j.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /map="17"
/clone="yk86d12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Caenorhabditis elegans.
Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g1116350
D64660.1 GI:1116350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Yuji Kohara
                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 0.4%;
Best Local Similarity 96.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           29; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1994)
                                                                                                                                                                                                                            .300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tabara, H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   116 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              පු
```

```
Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditina; Rhabditina; Rhabditina; Rhabditinae; Resolutinae; Caenorhabditis. 1 (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1 to 360) (bases 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditidea: Rhabditidae; Peloderinae; Caenorhabditis.
1 (bases 1 to 359)
McCombie, W.R., Kelley, J.M., Aubin, L., Goscoechea, M.,
FitzGerald, M.G., Wu, A., Adams, M.D., Dubnick, M., Kerlavage, A.R.,
Venter, J.C. and Fields, C.A.
Caenorhabditis elegans CDNAs
                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            wEST01956 Early embryo, Stratagene (cat. #937007) Caenorhabditis elegans cDNA clone CEESO41, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION C50455 Yuji Kohara unpublished cDNA Caenorhabditis elegans cDNA clone yk483h7 5', mRNA sequence.
ACCESSION C50455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10-NOV-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib="Early embryo, Stratagene (cat. #937007)"
61 c 60 g 122 t 1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11-SEP-1997
                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .;
0
     Length 337;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9712 Medical Center Drive, Rockville, MD 20850 USA Tel: 3018699056
Fax: 3018699423
Bmail: arkerlav@tigr.org
Score 29; DB 32; Length 337
Pred. No. 5.37e-15;
0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Caenorhabditis elegans"/db_xref="taxon:6239"/clone="CEESO41"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 0.4%; Score 31; DB 8; L. Best Local Similarity 100.0%; Pred. No. 2.09e-18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bioinformatics
The Institute for Genomic Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy 1527 TACAGTAGTCATTTAAAGGATTACTGTAGTT 1557
                                                                                                                                                                                                                                                              1423 TACTGTAGTTTTCGCTACGAGATATTTTG 1395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22 TACAGTAGTCATTTAAAGGATTACTGTAGTT 52
                                                                                                                                                                                                     178 TACTGTAGTTTTCGCTACGAGATATTTTG 206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
1. .359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Caenorhabditis elegans
Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Caenorhabditis elegans. Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Kerlavage, AR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Seq primer: M13 Foward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1993)
Other_ESTs: wEST01957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360 bp
```

```
1437 GTCATTTAAAGAATTACTGTAGTTTTC 1411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Seg primer: T7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g2535378
B36009.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sednence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B36009
                                                                                                                                                                                                         human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human.
                                                          10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
       S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   D75308 360 bp mRNA EST 14-DEC-1995
CELK098H4F Yuji Kohara unpublished cDNA Caenorhabditis elegans cDNA
clone yk98h4 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditida; Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis. 1 (bases 1 to 360)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kohara, Y., Mitsuki, H., Nishigaki, A., Motohashi, T., Sugimoto, A. and
                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                           /organism="Caenorhabditis elegans"
/strain="CB1489 him-8(e1489)"
/note="CB1489 him-8(e1489)"
/note="Lage-varied, sex-Hermaphrodite male,
tissue_type=whole animal"
/db_xref="taxon.6239"
/clone="yk483h7"
/clone="yk483h7"
/clone="iyk483h7"
/clone="iyk483h7"
/clone="iyk483h7"
/clone="iyk483h7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /strain="CB1489 him-8(e1489)"
/note="dev_stage=varied, sex=Hermaphrodite male, tissue_type=whole animal"
/db_xref="taxon:6239"
/clone="yk98h4"
/clone="yk98h4"
/clone="lb="ruji Kohara unpublished cDNA"
a 81 c 52 g 119 t l others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
0
                                                                                                                                                                                                                                                                                                                                                                                      ;
0
                                                                                                                                                                                                                                                                                                                                                Score 28; DB 15; Length 360;
Pred. No. 2.43e-13;
0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 27; DB 32; Length 360; Pred. No. 1.01e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Toward an expression map of the C.elegans genome Unpublished (1994)

    360
    /organism="Caenorhabditis elegans"

Contact: Yuji Kohara
Gene Library Lab
Gene Library Lab
Yata 1111, Mishima, Shizuoka 411, Japan
Tel: 0559-75-0771
Fax: 0559-75-6240
Email: ykohara@ddbj.nig.ac.j.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gene Library Lab
National Institute of Genetics
Yata 1111, Mishima, Shizuoka 411, Japan
Tel: 0559-75-0771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Insert Length: 895 Std Error: 0.00
High quality sequence stop: 363.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                             5264 GIGCGCCTTTAAGGAGTACTGTAATTTC 5237
                                                                                                                                                                                                                                                                                                                                                                                                                          99 GTGCGCCTTTAAGGAGTACTGTAATTTC 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fax: 0559-75-6240
Email: ykohara@ddbj.nig.ac.j
Insert Length: 895 Std Erro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Caenorhabditis elegans.
Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 0.4%;
Best Local Similarity 100.0%;
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Yuji Kohara
                                                                                                                                                                                                                                                                                                                                                Query Match 0.4%;
Best Local Similarity 100.0%;
Matches 28; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              D75308.1 GI:1121092
                                                                                                                                                                                                                                                                                               ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tabara, H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             91121092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Сb
```

89 GTCATTTAAAGAATTACTGTAGTTTTC 115

g

```
/note="Vector: scos-1; Human Chromosome 11 specific cosmid library prepared from flow sorted human Chromosome 11 derived from Chinese Hampster Ovary (CHO) monochromosomal somatic cell hybrid, J1" /db_xref="taxon:9606"
                                                                                                                                                                                                                                     Homo sapiens

Bukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;

Bukaryotae; mitochondrial primates; Catarrhini; Hominidae; Homo.

(bases 1 to 66)

Bvans, G.A., Burbee, D., Davies, C., Hahner, L., Oliver, T., Gilbert, M., Jones, D., Ward, T., Gilllan, E., Schagemann, J., Probst, S., Harris, J., DeFord, J., McFarland, J., Burzinski, K., Khan, M., Kupfer, K. and Garner, H.R.

Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
LOCUS B01439 66 bp DNA GSS 26-JUN-1996 DEFINITION cSRL-131f8-u cSRL flow sorted Chromosome 11 specific cosmid Homo sapiens genomic clone cSRL-131f8, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B36009 96 bp DNA GSS 16-OCT-1997 HS-1031-A2-H07-MR.abi CIT Human Genomic Sperm Library C Homo sapiens genomic clone Plate=CT 811 Col=14 Row=O, genomic survey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryotae; Metazoa; Chordata; Vertebrata; Mammalia; Eutheria;
Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 96)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mahairas, G.G., Zackrone, K.D., Smith, T., Tipton, S., Schmidt, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone="cSRL-131f8"
//clone_lib="cSRL flow sorted Chromosome 11 specific
/cosmid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /cell_type="chimeric hamster somatic cell hybrid" 4 c 18 g 34 t 1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               McDermott Center for Human Growth and Development
University of Texas Southwestern Medical Center At Dallas
5323 Harry Hines Blvd, Dallas TX 75235-8591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: gevans@utsw.swmed.edu, shane@mcdermott.swmed.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No. 6.31e-03;
Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 21; DB 37;
Pred. No. 6.31e-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Evans GA, Shane Probst
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        High quality sequence stop: 66. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8 AGATGTGTGTGTGTGTG 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /sex="female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 0.3%;
Best Local Similarity 100.0%;
Matches 21; Conservative
                                                                                                                       g1410717
B01439.1 GI:1410717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GI:2535378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Class: cosmid ends
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tel: 214-648-1600
Fax: 214-648-1666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
```

```
Traicoff.R., Abajian,C., Blanchard,A., West,A. and Hood,L.E. Construction of a Characterized Clone Resource for Genomic Sequencing: Generation and Preliminary Analysis of 20,000 Sequence Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="Organ: pineal gland; Vector: pT7T3D (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/note="Organ: sperm; Vector: pBeloBAC11; BAC Clones in
E-Coli DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: est@watson.wustl.edu
This clone is available royalty-free through LiNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 291 Std Error: 0.00
Seq primer: -28M13 rev2 from Amersham.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Mammalia;
Butheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 109)
Hilliar,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M.,
Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M.,
Parsons,J., Rifkin,L., Rohlfing,T., Tan,F., Trevaskis,E.,
Washg-Merck Est Project
Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             02-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA084532 109 bp mRNA EST 02-FEB-1997 zf76c11.rl Soares_pineal_gland_N3HPG Homo sapiens cDNA clone IMAGE:382868 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                On Apr 14, 1993 this sequence version replaced gi:692640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:9606"
/clone="Plate=CT 811 Col=14 Row=O"
/clone_lib="CIT Human Genomic Sperm Library C"
/sex="M"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 21; DB 37; Lengua. ...
Pred. No. 6.31e-03;
                                                                                                                                                        Contact: Mahairas GG, Zackrone KD, Hood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        32 t
                                                                                                                                                                         University of Washington Seattle, WA 98195, USA
Tel: (206) 616-8744
Fax: (206) 685-7301
Email: Kzackroneu washington.edu
Sequence Tagged Connector
Plate: CT 811 row: O column: 14
                                                                                                                                                                                                                                                                                                                       row: O column: 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                   High quality sequence stop: 96.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        32 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2827 TGTGTGTGTGTGTGTGACA 2807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              32 TGTGTGTGTGTGTGTGACA 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA084532.1 GI:1626588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 0.3%;
Best Local Similarity 100.0%;
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                           Class: BAC ends
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
```

```
3), double-stranded cDNA was size selected, ligated to Eco RI adapters (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of a modified pT713 vector (Pharmacia). Library constructed by Bento Soares and M.Fatina Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3']; double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT/T3 vector. RNA provided by Dr. Bertrand Jordan. Library went through two rounds of normalization, and was constructed by Bento Ab_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 (bases 1 to 122)
Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,
Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B.,
Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
    primer
                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA210472 122 bp mRNA EST 19-FEB-1997 mal30903.r1 Soares 2NbWT Mus musculus cDNA clone IMAGE:640948 5', AA210472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia;
Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (1996)
On Sep 12, 1996 this sequence version replaced gi:1397488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Washu'-HHMI Mouse EST Project
Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                       ;
0
                                                                                                                                                                                                                                                                                                                                            Length 109;
                                                                                                                                                                                                                      /clone_lib="Scares_pineal_gland_N3HPG"
/lab_host="DH10B (ampicillin resistant)"
25 c 17 g 33 t 1 others
                                                                                                                                                                                                                                                                                                                                                                                       1; Indels
                                                                                                                                                                                                                                                                                                                                          Score 20; DB 36; 1
Pred. No. 1.19e-01;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Seq primer: -28ml3 rev2 ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Marra M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Waterston, R.
The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         High quality sequence stop: 105.
Location/Qualifiers
                                                                                                                                                       /db_xref-"GDB:1291125"
                                                                                                                                                                            /db_xref="taxon:9606"
/clone="IMAGE:382868"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2808 GTCACACACACACACAT 2828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA210472.1 GI:1807769
                                                                                                                                                                                                                                                                                                                                          0.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                   52 GNCACACACACACACAT
                                                                                                                                                                                                                                                                                                                                                                                       20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .122
                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MGI:392940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
```

```
MGI:317077
                                                                                        q1566161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
15
                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
                                                                        ACCESSION
                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                           VERSION
                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
Eukaryota; Metazoa; Chordata; Vertebrata; Mammalia; Eutheria;
Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 126)
Adams, M.D., Rounsley, S.D., Zhao, S., Bass, S., Linher, K., Golden, K.,
Berry, K., Granger, D., Suh, E., Wible, C., Shizuya, H., Simon, M. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    http://www.tigr.org/tdb/humgen/bac_end_search/bac_end_search.html.
Seq primer: M13-21
Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Use of a random human BAC End Sequence Database for Sequence-Ready
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: hbe@tigr.org
Clones are availabe from Research Genetics (info@resgen.com). BAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/note="Vector: pBeloBAC11; Site_1: EcoR1; Site_2: EcoR1;
CalTech Human BAC Library D"
                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                           AQ308985 126 bp DNA GSS 21-DEC-1998 CITBI-E1-2525L8.TF CITBI-E1 Homo sapiens genomic clone 2525L8.genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
0
                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 21; DB 41; Length 126;
Pred. No. 6.31e-03;
0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1998)
Other GSSs: CITB1-1252L8.TR
Contact: Shaying Zhao, William Nierman, Mark Adams
Contact: Shaying Zhao, William Nierman, Mark Adams
Department of Eukaryotic Genomics
The Institute for Genomic Research
9712 Medical Center Dr., Rockville, MD 20850
Fax: 301 838 0208
                                                                                                                                                                                     DB 9; Length 122;
                                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                         Pred. No. 2.90e-04;
                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       35 t
                                                                                                                                 41 t
                 /clone="IMAGE:640948"
/clone_lib="Soares 2NbMT"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone="2525L8"
/clone_lib="CITBI-E1"
/sex="male"
                                                                          /tissue_type="Thymus"
                                                                                           /dev_stage="4 weeks"
/lab_host="DH10B"
9 c 43 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       48 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /cell_type="sperm"
6 c 48 a
                                                                                                                                   43 g
                                                                                                                                                                                                                                                                                   Cp 2831 GAGATGTGTGTGTGTGTGTG 2810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2827 TGTGTGTGTGTGTGTGACA 2807
                                                                                                                                                                                                                                                                81 GAGATGTGTGTGTGTGTGTG 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                      g4041019
AQ308985.1 GI:4041019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 0.3%;
Best Local Similarity 100.0%;
Matches 21; Conservative
                                                                                                                                                                                     Query Match 0.3%;
Best Local Similarity 100.0%;
Matches 22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        42 TGTGTGTGTGTGTGTGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         end search page:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Map Building
                                                                                                                                 29 a
                                                                                                                                                                                                                                                                                                                                                            RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                  a
```

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

[ (bases 1 to 136)

Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T., Geisel,S., Kucaba,T., Lacy,M., Le.M., Martin,J., Morris,M., Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B., Thesing,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
     AA067881 136 bp mRNA EST 06-FEB-1997 mm32f03.rl Stratagene mouse skin (#937313) Mus musculus cDNA clone IMAGE:523229 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
06-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                         The WashU-HHMI Mouse EST Project
Unpublished (1996)
On Sep 12, 1996 this sequence version replaced gi:1394336.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Marra M/Mouse EST Project
WashU-HHMI Mouse EST Project
Washington University School of MedicineP
4444 Porest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone="IMAGE:523229"
/clone_lib="Stratagene mouse skin (#937313)"
/sex="females"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 21; DB 35; Length 136;
Pred. No. 6.31e-03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /tissue_type="whole skin"
/dev_stage="11 weeks old"
/lab.host="SOLR (kanamycin resistant)"
39 c 24 g 50 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Notice of the Mersham Seq primer: -28ml3 rev1 ET from Amersham High quality sequence stop: 128. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Search completed: Mon Aug 9 00:23:21 1999 Job time: 12755 secs.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2827 TGTGTGTGTGTGTGTGACA 2807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18 TGTGTGTGTGTGTGTGACA 38
                                                                                                                              AA067881.1 GI:1566161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ouery Match 0.3%;
Best Local Similarity 100.0%;
Matches 21; Conservative
                                                                                                                                                                                                           Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                       Waterston, R.
                                                                                                                                                                                    house mouse.
```

		·	
			••
			• •